

Model:

PVE-500

Operating Instructions page 1(E)

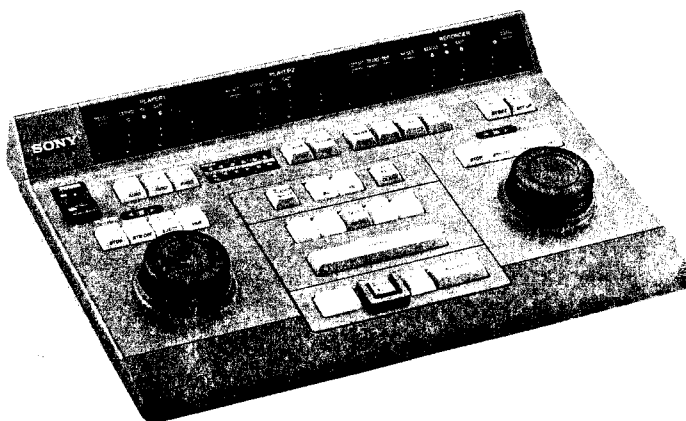
Before operating this unit, please read this manual thoroughly and retain it for future reference.

Mode d'emploi page 1(F)

Avant la mise en service de cet appareil, prière de lire attentivement ce mode d'emploi que l'on conservera pour toute référence ultérieure.

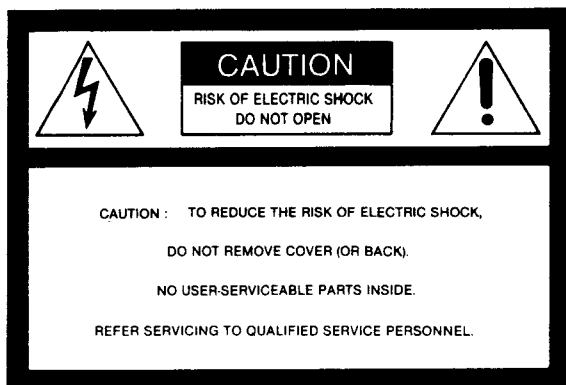
Bedienungsanleitung page 1(G)

Lesen Sie diese Anleitung bitte sorgfältig durch und bewahren Sie sie für späteres Nachschlagen auf.



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For customers in the U.S.A.

WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC rules.

For customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Pour les utilisateurs au Canada

Cet appareil est conforme aux normes Classe A pour bruits radioélectriques, spécifiés dans le Règlement sur le brouillage radioélectrique.

Bescheinigung des Herstellers

Hiermit wird bescheinigt, daß die Schnitt-Steuereinheit PVE-500 in Übereinstimmung mit den Bestimmungen der BMPT-Amtsblatt Vfg 243/1991 und Vfg 46/1992 funkenstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z.B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung. Dem Bundesamt für Zulassungen in der Telekommunikation wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Sony Deutschland GmbH
Hugo Eckener Str. 20
50829 Köln

Hinweis

Gemäß der Amtsblätter des BMPT Nm. 61/1991 und 6/1992 wird der Betreiber darauf aufmerksam gemacht, daß die von ihm mit diesem Gerät zusammengestellte Anlage auch den technischen Bestimmungen dieser Amtsblätter genügen muß.

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About this Manual

This section describes the organization of this manual and some conventions of notation used.

Intended audience

This manual is a guide to the PVE-500 editing control unit. It is intended to be read by persons responsible for the operation of professional video equipment, for example, at cable television stations and corporate production facilities. Therefore it assumes that readers will be familiar with the basic concepts of video editing and have some experience in operating professional video equipment.

Manual organization

The organization of this manual is as follows.

Chapter 1 Outline

Explains the principal features of the unit and optional accessories.

Chapter 2 Names and Functions of Parts

Briefly explains the function of each of the switches, controls, and connectors on the control and connector panels.

Persons already familiar with professional or broadcast editing equipment can obtain a general grasp of the unit's capabilities by reading through this chapter.

Chapter 3 Preparations

Covers matters which you need to know before using the unit, such as how to connect external equipment to this unit in order to configure a complete editing system, and preparations to make before starting to edit.

Chapter 4 Basic Editing — Cut Edits

Explains how to perform basic cut edits, using one player and one recorder, for instantaneous switching between program sources.

Chapter 5 Editing with Two Players — A/B Roll Edits

Explains how to perform A/B roll edits in which you can add special effects while switching between the playback signals of two players, using a video switcher and an audio mixer connected to this unit.

Chapter 6 Advanced Editing

Explains advanced techniques not covered in previous chapters.

Chapter 7 Managing Edit Data — The Edit Decision List (EDL)

Explains how to save settings made in order to execute an automatic edit, and how to recall the settings and use them again.

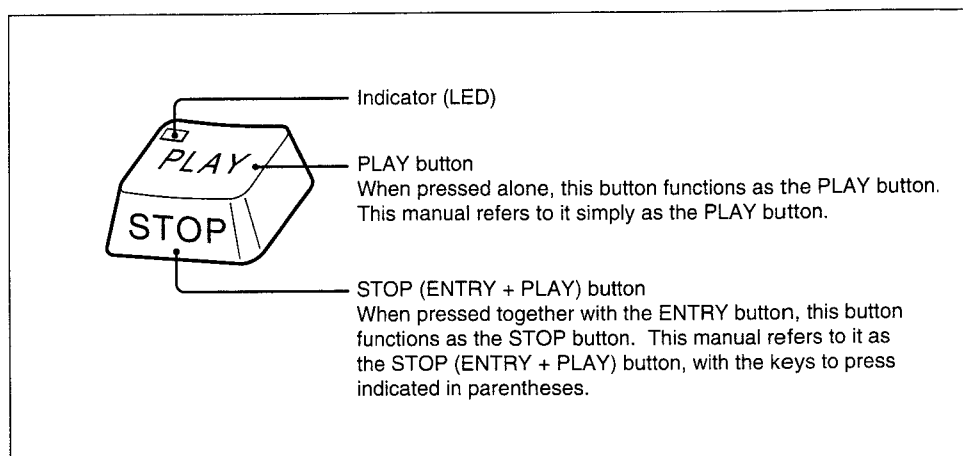
Appendix

Contains a list of error messages with instructions on how to respond, a list of steps to take when you suspect trouble with the unit, specifications, and a glossary of technical terms used in this manual.

Conventions

Button names

As shown in the example below, some of the buttons on this unit have two functions, depending on whether they are pressed alone or in combination with the ENTRY button. The two functions are indicated on the top and front sides of the button.



Control panel illustrations

The numbers of buttons and switches in illustrations of the control panel correspond to steps in the procedure under discussion. In order to keep the illustrations simple, frequently used buttons are sometimes mentioned in the text but not numbered in the illustrations.

Cross references

References to other manuals or to sections of this manual containing related information appear in *italics*.

Technical terms

Technical terms are explained in a glossary in the Appendix to this manual.

Chapter 1

Outline

This chapter explains the principal features of the unit and optional accessories.

Principal Features	1-2 (E)
Optional Accessories	1-4 (E)

Principal Features

The PVE-500 is an electronic editing control unit which allows you to perform advanced editing easily and efficiently.

You can connect a video switcher, an audio mixer, and up to three VTRs to configure an A/B roll editing system. The principal features of the unit are as follows.

Controls up to three VTRs

You can control two players and one recorder by remote control from the control panel of this unit. The control panel features independent search dials and control buttons for the players and the recorder, allowing you to locate edit points quickly and precisely.

Three time counters

There are three time counters, allowing you to view time count data for two players and one recorder simultaneously.

Video switcher control

You can connect video switchers equipped with a 9-pin serial interface, such as DFS-500 series or BVS-3000 series video switchers, using the optional 9-pin remote cable. Remote control of the video switcher allows you to:

- execute automatic transitions for special effects when switching between the playback of selected players.
- control the DFS-500 snapshot function, for automatic storing and recalling of snapshots in coordination with edits stored in this unit.

Audio mixer control

You can connect a VSP-A600, MXP-290, or MXP-390 series audio mixer, or another audio mixer equipped with a 15-pin parallel or 9-pin serial interface, using the optional mixer control cable or a 9-pin remote cable. Remote control of the audio mixer allows you to switch the audio signals of selected players and to control automatic transition effects.

A/B roll editing

You can create A/B roll effects such as wipes and dissolves. The A and B signals can be selected from a total of five sources, including two players and three auxiliary input sources.

SYNC roll editing

You can synchronize two player VTRs to execute effects automatically at specified edit points.

Flexible edit modes

You can choose between assemble mode, for simultaneous editing of video and two audio channels, or insert mode, which allows you to edit video and audio separately or in combination. In insert mode, you can specify separate IN points (edit start points) for audio and video (split editing).

Dynamic Tracking (DT)¹⁾ for variable-speed editing

If your player supports dynamic tracking, you can edit freeze frame or variable speed playback.

GPI²⁾ output

You can output trigger signals to control external equipment when you execute an edit.

Edit Decision List

You can register data for up to 100 edits in an edit decision list (EDL) stored in the unit's internal memory (internal EDL mode). Internal EDL data can be recalled and changed at any time. It remains in the unit's internal memory for at least 100 hours after the power is turned off (provided that the unit has been powered on for at least two hours). To save edit data permanently, you can connect a personal computer or other external I/O device. You can also choose to output edit data to the external I/O device each time you execute an automatic edit (external EDL mode).

Reference video signals for precise synchronization

The unit can use reference video signals for precise synchronization. If you set the 75-ohm terminator switch to OFF, reference video signal input can be output to other equipment using a T connector.

Start delay measurement

The unit automatically measures the amount of time which a connected VTR requires to achieve stable tape movement after receiving a start command. Information for each VTR is stored in the unit's internal memory. It remains available for at least 100 hours after the unit is turned off (provided that the unit has been powered on for at least two hours).

Easy setup and initialization

Slide switches are available on the front panel for easy setting and selection of time codes, CTL counts, preroll³⁾ times, and synchronization modes. Less frequently used settings are made using the search dials and a setup menu.

Error messages

The unit alerts you to mistaken operations with a warning sound and a concise error message.

Rack mounting

With the RMM-500 control panel mount adaptor, you can mount this unit in a standard EIA⁴⁾ 19-inch rack or editing operation desk.

1) DT is a trademark of Sony Corporation.

2) GPI: General Purpose Interface

3) Preroll: An operation in which a VTR begins to run its tape from a point a few seconds in advance of the edit IN point, enabling the tape to reach a steady speed at the edit IN point and to synchronize with other video tapes.

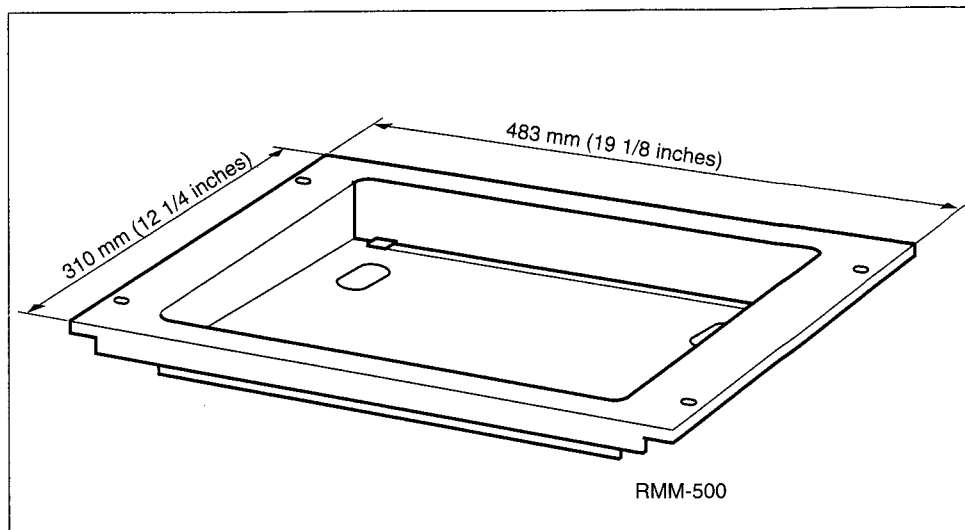
4) EIA: Electronic Industries Association

Optional Accessories

Optional accessories such as the following are available for purchase for use with this unit.

RMM-500 control panel mount adaptor

An adaptor which allows you to mount the unit in a standard EIA 19-inch rack or editing desk. For details please contact a Sony sales representative.



RMM-500 control panel mount adaptor

RCC-5AA mixer control cable

A 9-pin/15-pin conversion cable for use in connecting an audio mixer equipped with a 15-pin parallel interface (VSP-A600, MXP-290, MXP-P390, etc.) to this unit.

RCC-5G/10G/30G

Cables for use in connecting a video switcher or an audio mixer equipped with a 9-pin serial interface (MXP-S390, etc.) to this unit.

Chapter 2

Names and Functions of Parts

This chapter briefly explains the function of each of the switches, controls, and connectors on the control and connector panels.

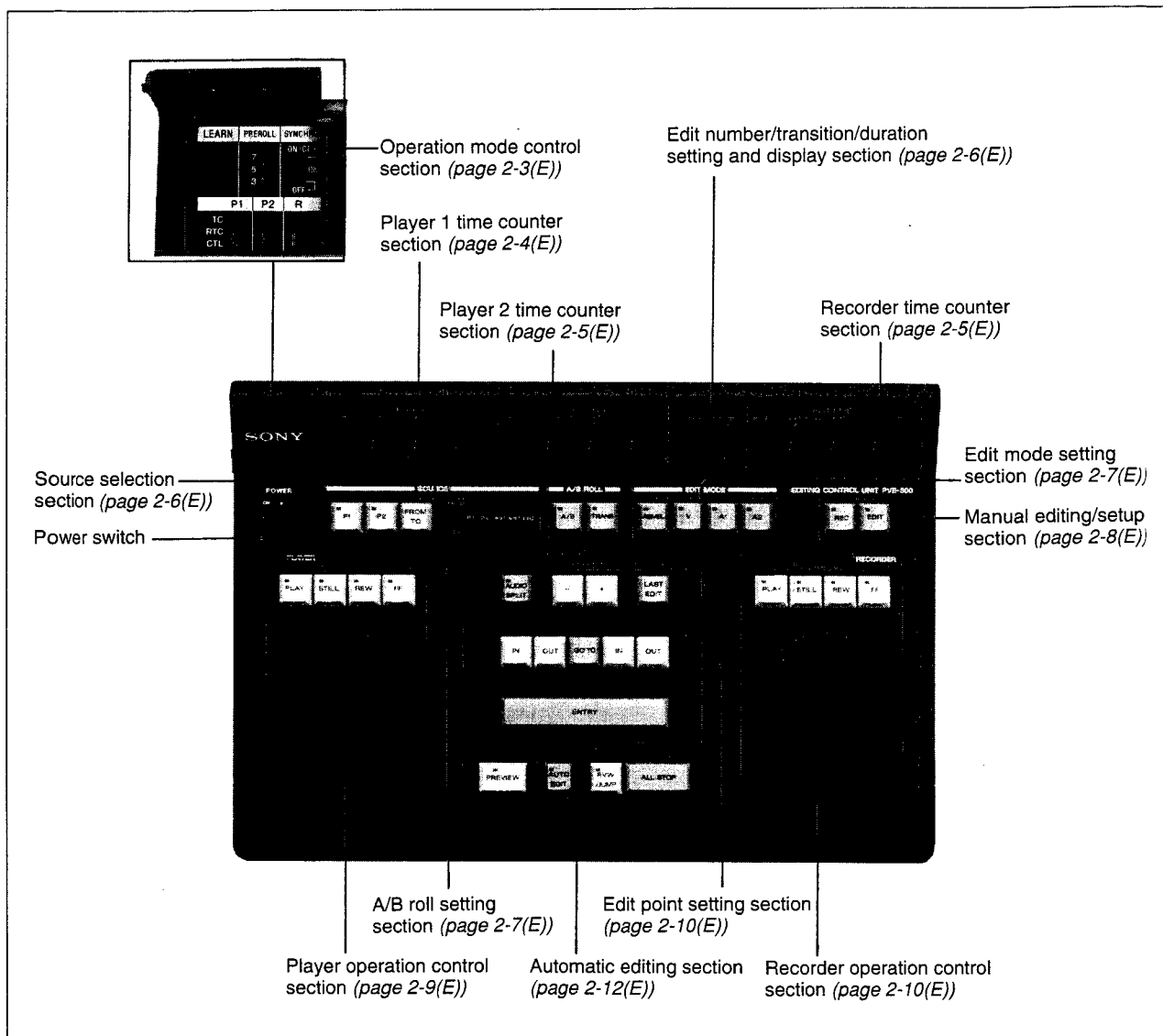
For more detailed information about how to use the controls to set up and operate the unit, see the following sections.

Control Panel2-2 (E)

Connector Panel2-13 (E)

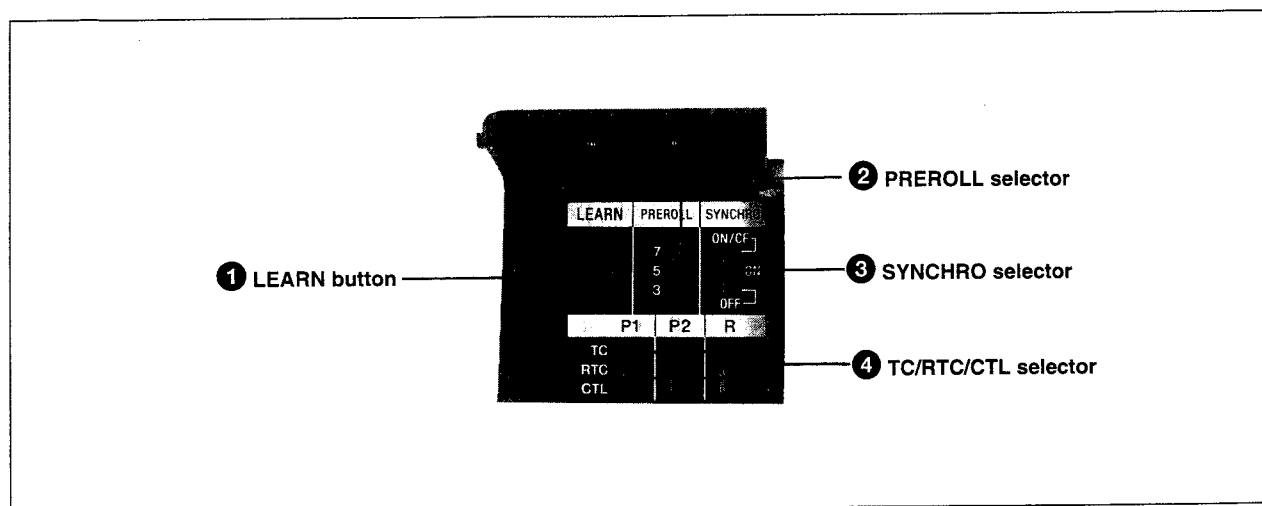
Control Panel

The control panel is configured as follows. Detailed information for each of the controls is given on the pages indicated in parentheses.



Control panel

Operation mode control section



Operation mode control section

1 LEARN button

Press to automatically measure the start delays of the connected VTRs.

2 PREROLL (preroll time) selector

Set the preroll time to 7 (or 10) seconds, 5 seconds, or 3 seconds. If you set this selector to 7 seconds, the preroll time will be either 7 or 10 seconds, depending on the setting made using the setup menu.

3 SYNCHRO (synchronization) selector

Determines whether or not to synchronize and use color framing.

ON/CF: Synchronizes and uses color framing.

This yields a stable picture, but editing precision is slightly lower.

ON: Synchronizes but does not use color framing.

OFF: Does not synchronize.

4 TC/RTC/CTL (edit reference) selectors (for player 1, player 2, and recorder)

Determine the time counter display format for player 1 (P1), player 2 (P2), and the recorder (R).

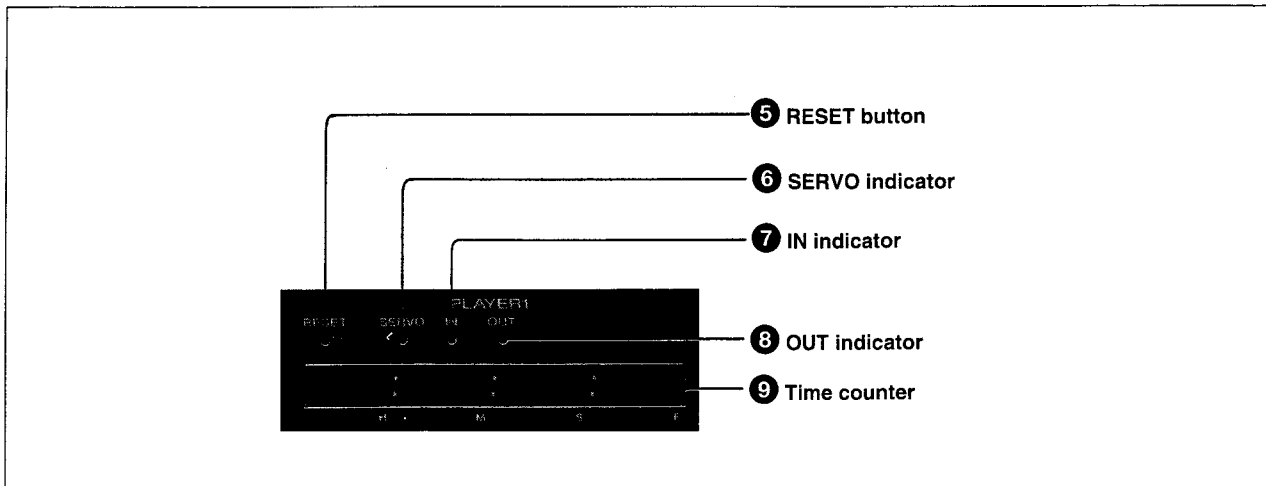
TC: Displays the recorded time code (absolute value). The display is not reset even if you press the RESET button.

RTC: Displays an incremented or decremented time code after reset (relative value). Reset when you press the RESET button.

CTL: Displays a CTL pulse count after reset. Reset when you press the RESET button.

Control Panel

Player 1 time counter section



Player 1 time counter section

5 RESET button

Press to reset the time counter 9 and to reset edit points.

6 SERVO indicator (green)

Lights when player 1 is running with the servo locked.

7 IN (edit start point) indicator (red)

Lights when an IN point has been set for player 1, and flashes to indicate that an IN point needs to be set. Flashes at high speed while an IN point or duration (distance from an IN point to an OUT point) is being displayed in the time counter 9.

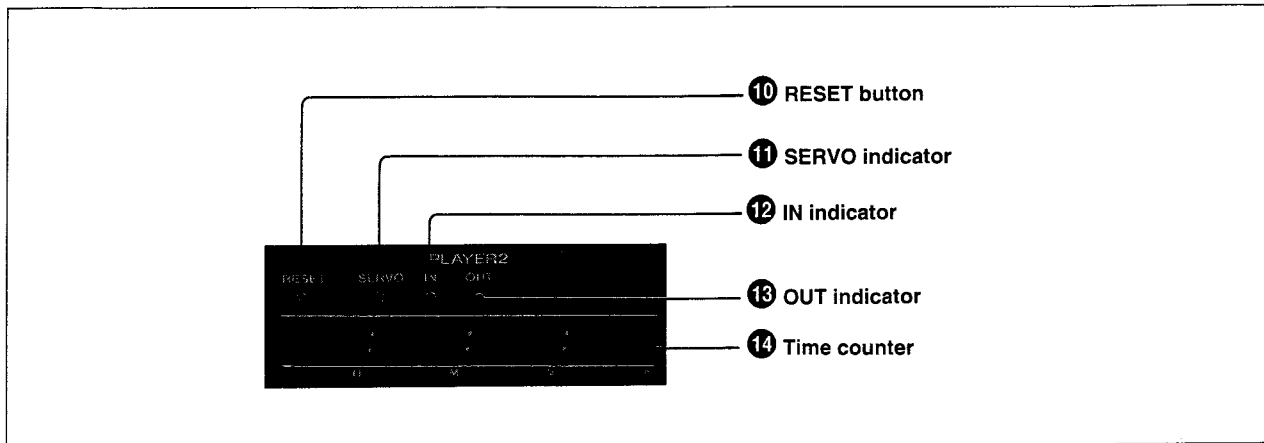
8 OUT (edit end point) indicator (red)

Lights when an OUT point has been set for player 1, and flashes to indicate that an OUT point needs to be set. Flashes at high speed while an OUT point or duration is being displayed in the time counter 9.

9 Time counter

Depending upon the setting of the TC/RTC/CTL selector, displays an absolute or relative time code for player 1, or a control signal count. During setup with the setup menu, displays the menu item number. Error messages are also displayed in this time counter.

Player 2 time counter section

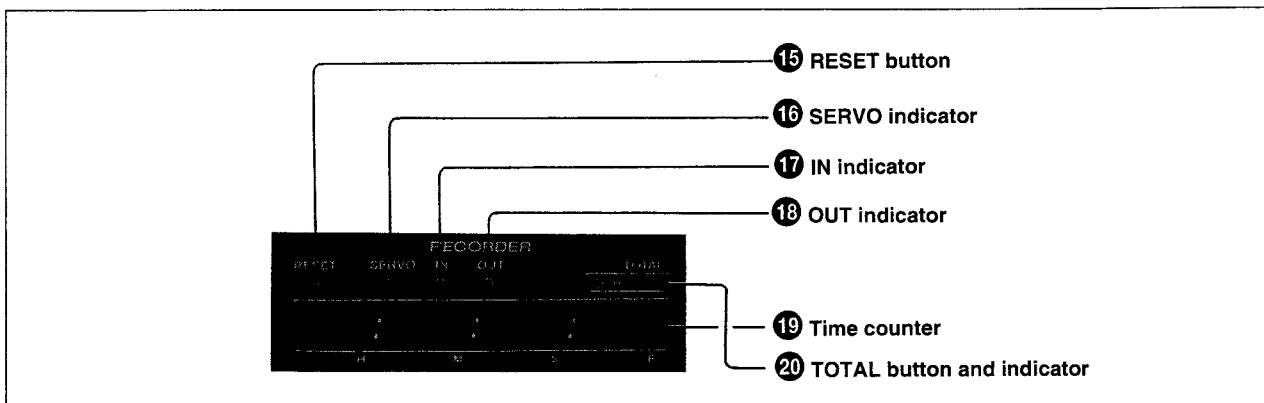


Player 2 time counter section

During setup with the setup menu, the time counter 14 displays an abbreviated item title.

Other buttons and indicators have the same functions as those explained in the previous section "Player 1 time counter section."

Recorder time counter section



Recorder time counter section

From the RESET button 15 to the OUT indicator 18, these buttons and indicators have same functions as those explained under items 5 to 8 in "Player 1 time counter section" (page 2-4(E)).

19 Time counter

Depending upon the settings of the TC/RTC/CTL selector and the TOTAL button 20, displays an absolute or relative time code, a CTL signal count, or the recorder's total running time. During setup with the setup menu, displays the setup item data. Error messages are also displayed in this time counter.

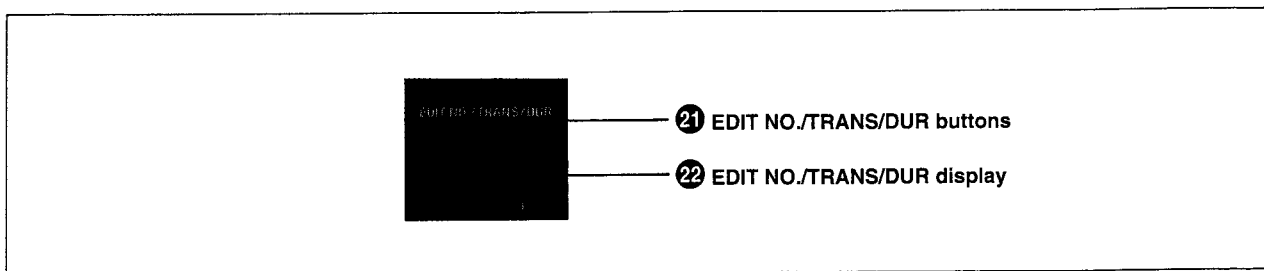
20 TOTAL (tonal running time) button and indicator (red)

Press the TOTAL button if you want to display the recorder's total running time in the time counter. The indicator begins to flash when you press the button. Press the button again to restore the time counter's original display.

If you want to reset the total running time, press the RESET button 15 while the total running time is displayed in the time counter.

Control Panel

Edit number/transition/duration setting and display section



Edit number/transition/duration setting and display section

21 EDIT NO./TRANS/DUR (edit number/transition/duration) buttons

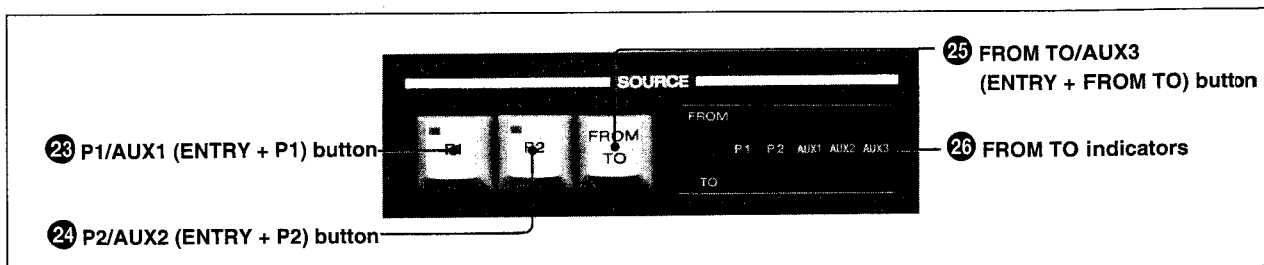
Use to set the edit number, effect transition time, or the duration of an edit segment. The three buttons correspond to the three digits in the display

22.

22 EDIT NO./TRANS/DUR display

To interpret the number in this display, check the TRANS button in the A/B roll setting section. If the TRANS button is lit, this display shows an effect transition time. If the button is flashing, the display shows an edit duration. If the button is out, the display shows the current edit number.

Source selection section



Source selection section

23 P1/AUX1 (ENTRY + P1) button

P1 (player 1): Press to select the VTR connected to the PLAYER 1 connector as the source. The button lights when you press it.

AUX1 (ENTRY + P1)(auxiliary source 1): Press to select the equipment connected to the AUX1 connector as the source, for example, a camera connected to a video switcher.

24 P2/AUX2 (ENTRY + P2) button

P2 (player 2): Press to select the VTR connected to the PLAYER 2 connector as the source. The button lights when you press it.

AUX2 (ENTRY + P2)(auxiliary source 2): Press to select the equipment connected to the AUX2 connector as the source, for example a camera connected to a video switcher.

25 FROM TO/AUX3 (ENTRY + FROM TO) button

FROM TO: Press to change the FROM source (source before a transition) or the TO source (source after a transition).

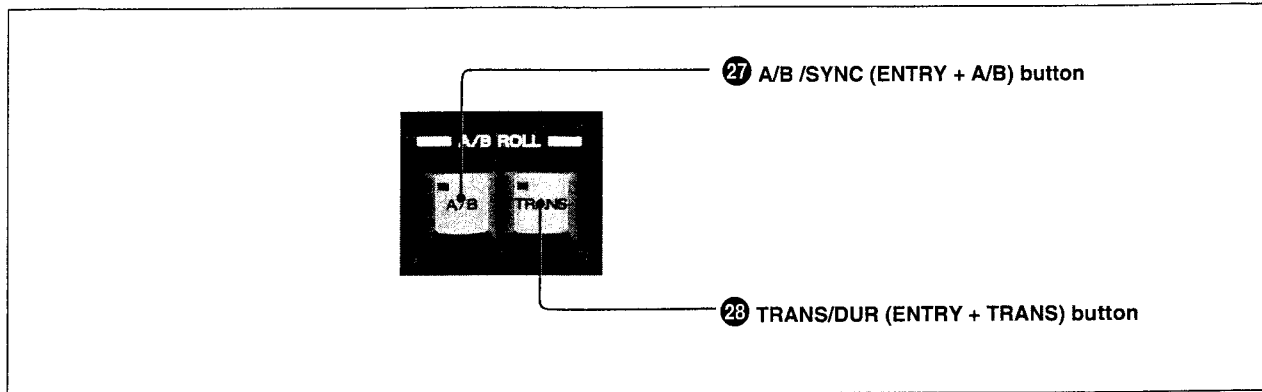
AUX3 (ENTRY + FROM TO)(auxiliary source 3): Press to select the equipment connected to the AUX3 connector as the source, for example a camera connected to a video switcher.

26 FROM TO indicators

Green: Indicate whether the next operation will be for the FROM source or the TO source.

Red: Indicate the currently selected FROM and TO sources. Flash when the selected source players are in DT playback mode.

A/B roll setting section



A/B roll setting section

27 A/B/SYNC (ENTRY + A/B) button

A/B (A/B roll): Press to select A/B roll mode. The button lights.

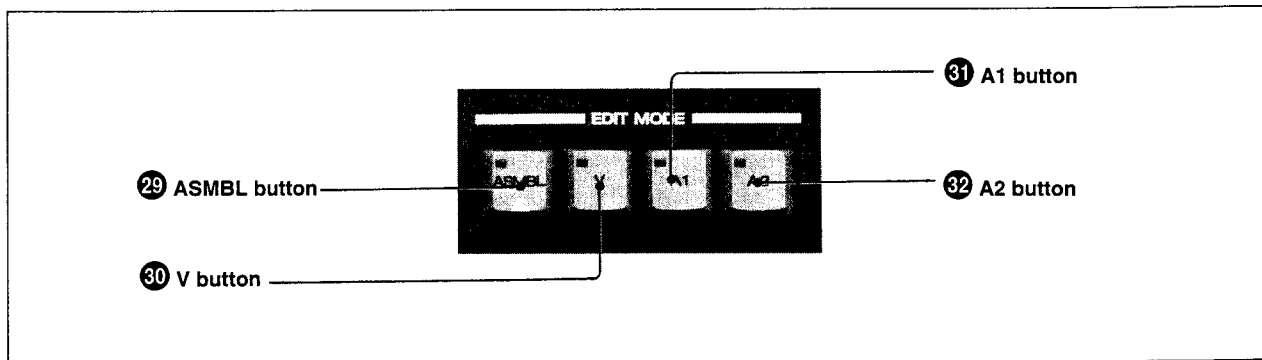
SYNC (ENTRY + A/B)(SYNC roll): Press to select SYNC roll mode. The button begins to flash.

28 TRANS/DUR (ENTRY + TRANS) button

TRANS (transition): Press to set the effect transition time. The button lights.

DUR (ENTRY + TRANS)(duration): Press to set the edit duration. The button begins to flash.

Edit mode setting section



Edit mode setting section

29 ASMBL (assemble) button

Press to select assemble mode. The button lights. If any of the insert mode buttons are lit, press them to exit insert mode before pressing this button.

For information about the assemble and insert modes, see "Selecting the Edit Mode" (page 4-3(E)).

30 V (video) button

Press to select video insert mode. The button lights. If the ASMBL button is lit, press it to exit assemble mode before pressing this button.

31 A1 (audio 1) button

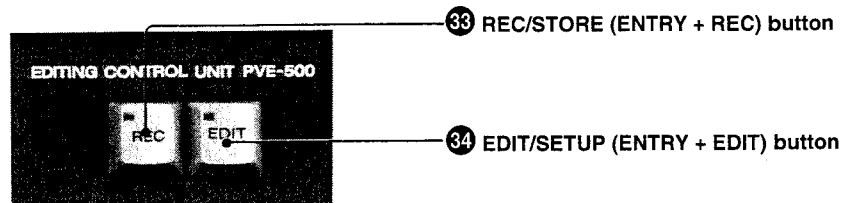
Press to select channel 1 audio insert mode. The button lights. If the ASMBL button is lit, press it to exit assemble mode before pressing this button.

32 A2 (audio 2) button

Press to select channel 2 audio insert mode. The button lights. If the ASMBL button is lit, press it to exit assemble mode before pressing this button.

Control Panel

Manual editing/setup section



Manual editing/setup section

33 REC/STORE (ENTRY + REC) button

REC (record): Press to put the unit into E-E mode ¹⁾. While you keep the button pressed, the recorder's video, audio 1 and audio 2 input signals are output to the monitor but not recorded.

For manual editing, press this button together with the PLAY button 41 in the recorder operation control section at the point where you wish to begin recording.

STORE (ENTRY + REC): If the unit is in internal EDL mode (*see page 7-3(E)*), edit data is saved in the unit's internal memory. If this button is pressed while you are using the setup menu, setup data for the current menu item is written to the unit's EEPROM ²⁾.

34 EDIT/SETUP (ENTRY + EDIT) button

EDIT: Press to put the unit into E-E mode, using the edit mode set with the edit mode buttons. While you keep the button pressed, the recorder's input signals selected by the edit mode are output to the monitor but not recorded.

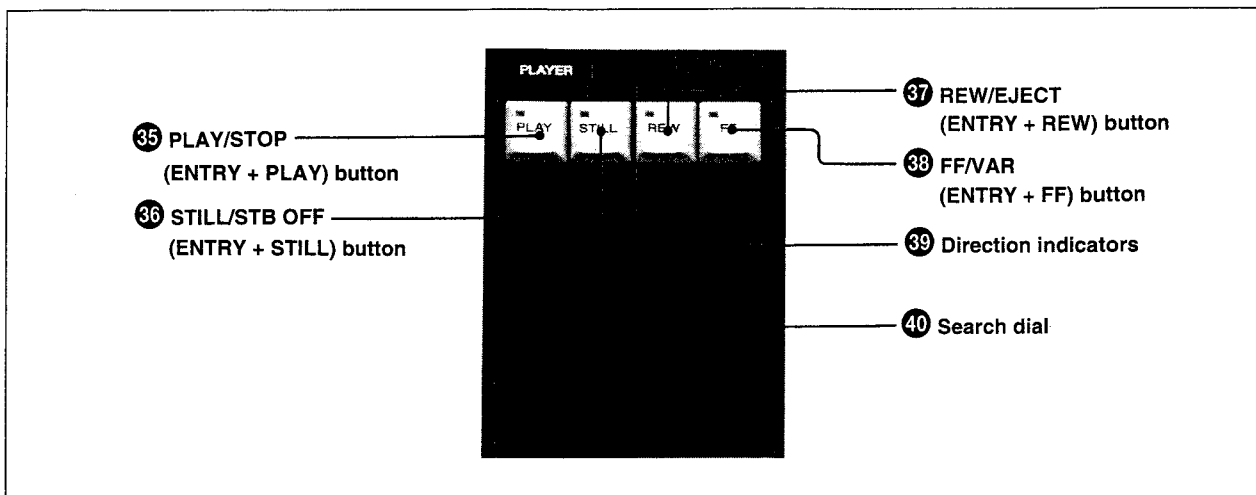
For manual editing, press this button together with the PLAY button 41 in the recorder operation control section at the point where you wish to begin recording.

SETUP (ENTRY + EDIT): Press to call up the search dial setup menu (setup mode).

1) E-E: Electric-to-Electric

2) EEPROM: Electrically erasable programmable ROM

Player operation control section



Player operation control section

35 PLAY/STOP (ENTRY + PLAY) button

PLAY: Plays the tape.

STOP (ENTRY + PLAY): Stops the tape.

36 STILL/STB OFF (ENTRY + STILL) button

STILL: Gives a still picture.

STB OFF (ENTRY + STILL)(standby off): Press when the unit is paused or displaying a still picture and you want to exit standby mode (standby off).

37 REW/EJECT (ENTRY + REW) button

REW (rewind): Rewinds the tape.

EJECT (ENTRY + REW): Ejects the cassette.

38 FF/VAR (ENTRY + FF) button

FF (fast forward): Fast forwards the tape.

VAR (ENTRY + FF)(variable): When using a player which supports Dynamic Tracking (DT), press the search dial to bring it to the raised position, then press this button. You will be able to edit noiseless, variable-speed playback (DT editing). The direction indicator 39 flash in red while you are running a tape in variable-speed mode.

39 Direction indicators

Light to show the tape direction. The indicators go out when the unit is in standby off mode.

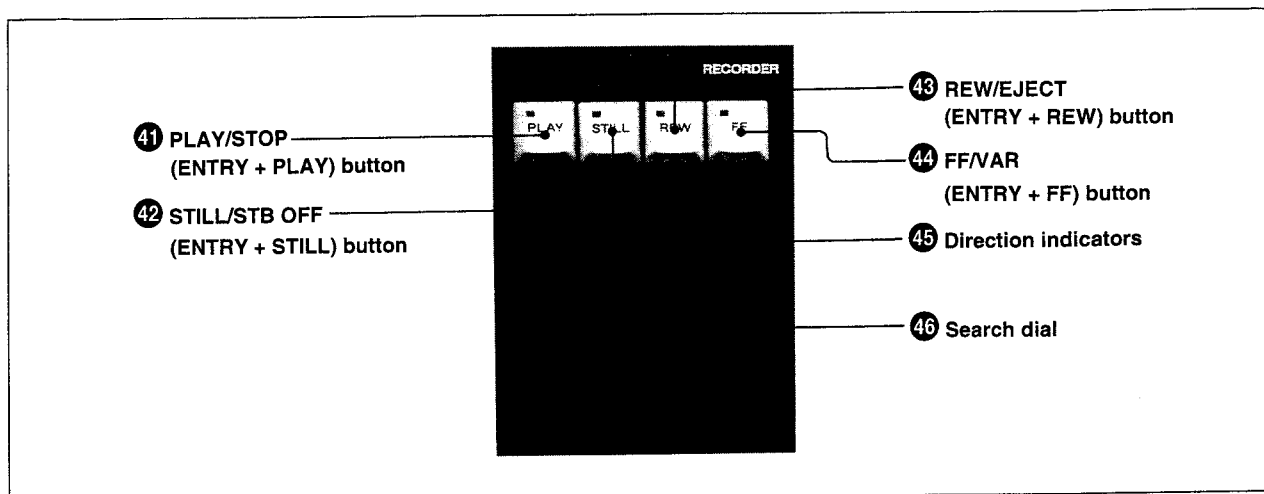
40 Search dial

Controls the movement of the tape. Use while searching for an edit point or during DT playback. The dial has two positions: a raised position for shuttle mode playback and a depressed position for jog mode playback. Press the dial to move from one mode to the other.

If your player supports Dynamic Tracking (DT) playback, you can use this dial to perform noiseless editing of variable-speed playback. With the search dial in the raised position, press the VAR (ENTRY + FF) button 38 to enter variable playback mode.

Control Panel

Recorder operation control section

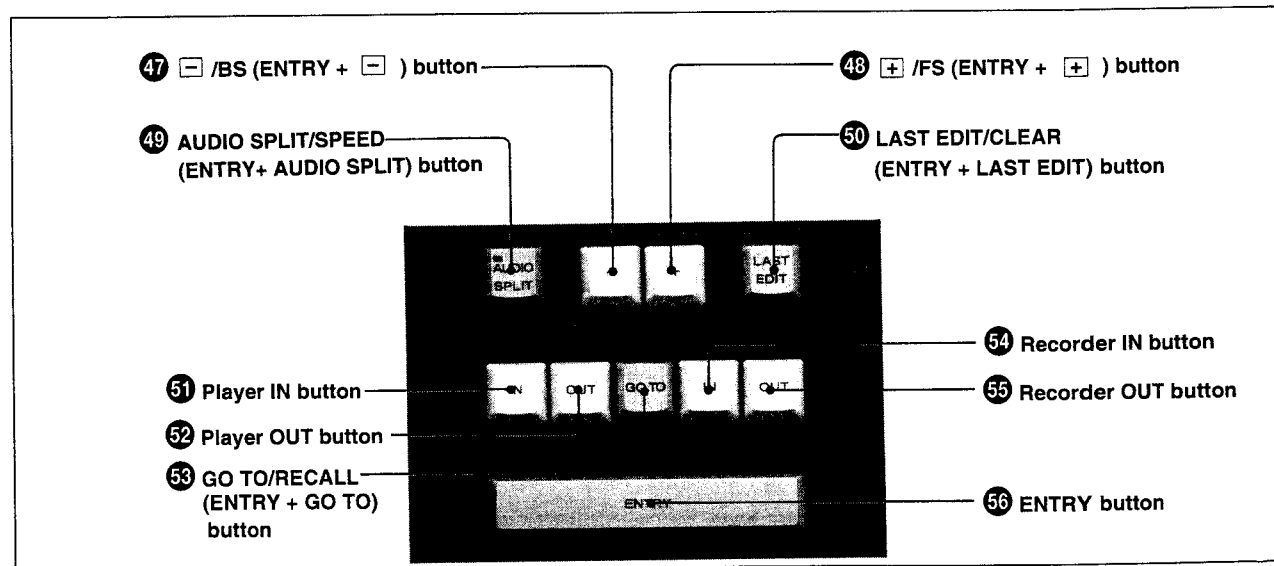


Recorder operation control section

These controls have the same functions as those explained in "Player operation control section" (page 2-9(E)). If your recorder supports Dynamic Tracking

(DT), you can use it for noiseless, variable-speed playback.

Edit point setting section



Edit point setting section

47 [] /BS(ENTRY + []) button

[] (Trim -): Press this button together with the IN button **51**, **54** or OUT button **52**, **55** when you want to move an IN or OUT point one frame back. Keep the buttons pressed to execute this function continuously. When you want to shift an entire edit segment, press this button

together with both the IN and OUT buttons. The IN and OUT points will be moved one frame back.

BS (ENTRY + [])(previous edit): In internal EDL mode, calls up the previous edit. Keep this button pressed to execute this function continuously.

48 **[+] /FS(ENTRY + [+]) button**

[+] (Trim +): Press this button together with the IN button **51**, **54** or OUT button **52**, **55** when you want to move an IN or OUT point one frame forward. Keep the buttons pressed to execute this function continuously. When you want to shift an entire edit segment forward, press this button together with both the IN and OUT buttons. The IN and OUT points will be moved one frame forward.

FS (ENTRY + [+]) (next edit): In internal EDL mode, calls up the next edit. Keep this button pressed to execute this function continuously.

49 **AUDIO SPLIT/SPEED (ENTRY+AUDIO SPLIT) button**

AUDIO SPLIT: To perform split editing, press this button so that it lights, then enter the audio IN point.

SPEED (ENTRY + AUDIO SPLIT): In DT editing, press this button to change the initial playback speed.

50 **LAST EDIT/CLEAR (ENTRY + LAST EDIT) button**

LAST EDIT: Recalls the contents of the previous preview¹⁾.

In internal EDL mode, you can also press this button when you want to restore the last edit after clearing it.

CLEAR (ENTRY + LAST EDIT): In internal EDL mode, clears the current edit.

51 **Player IN button**

To set a player IN point, press this button together with the ENTRY button **56**.

To confirm the IN point of the currently selected player, press this button alone. While you hold it down, the IN point is displayed in the time counter. To display the duration, press this button together with the player OUT button **52**.

52 **Player OUT button**

To set a player OUT point, press this button together with the ENTRY button **56**.

To confirm the OUT point of the currently selected player, press this button alone.

53 **GO TO/RECALL (ENTRY + GO TO) button**

GO TO: This button allows you to view the picture at an IN point or OUT point. Press it together with the IN button **51**, **54** or OUT button **52**, **55**.

RECALL (ENTRY + GO TO): When an edit number is being displayed in the time counter, press this button to make it the current edit.

54 **Recorder IN button**

To set a recorder IN point, press this button together with the ENTRY button **56**.

To confirm the recorder IN point, press this button alone. While you hold it down, the IN point is displayed in the time counter.

To display the duration, press this button together with the recorder OUT button **55**.

55 **Recorder OUT button**

To set a recorder OUT point, press this button together with the ENTRY button **56**.

To confirm the recorder OUT point, press this button alone.

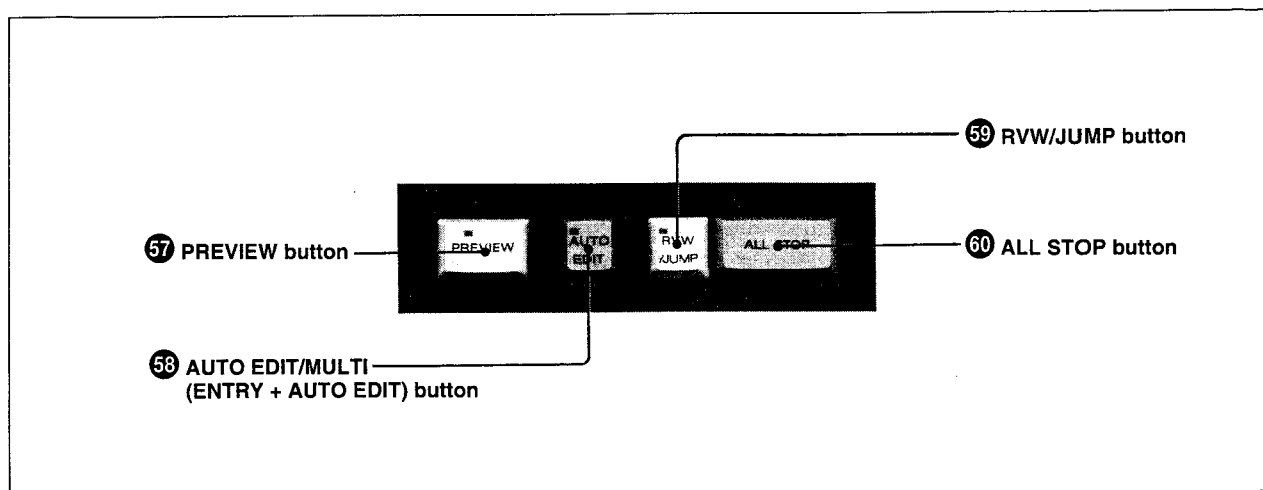
56 **ENTRY button**

Press this button together with other buttons to set IN or OUT points or select the function written on the front side of another button.

1) To rehearse an edit segment without recording.

Control Panel

Automatic editing section



Automatic editing section

57 PREVIEW button

Press to conduct a rehearsal of the edit. The button lights.

58 AUTO EDIT/MULTI (ENTRY + AUTO EDIT) button

AUTO EDIT: Press to start an automatic edit. The button lights.

MULTI (ENTRY + AUTO EDIT)(multiple edits): In internal EDL mode, press when you want to execute two or more edits in succession, beginning with the current edit. The edits are executed until the last one has finished or until you press the ALL STOP button 60.

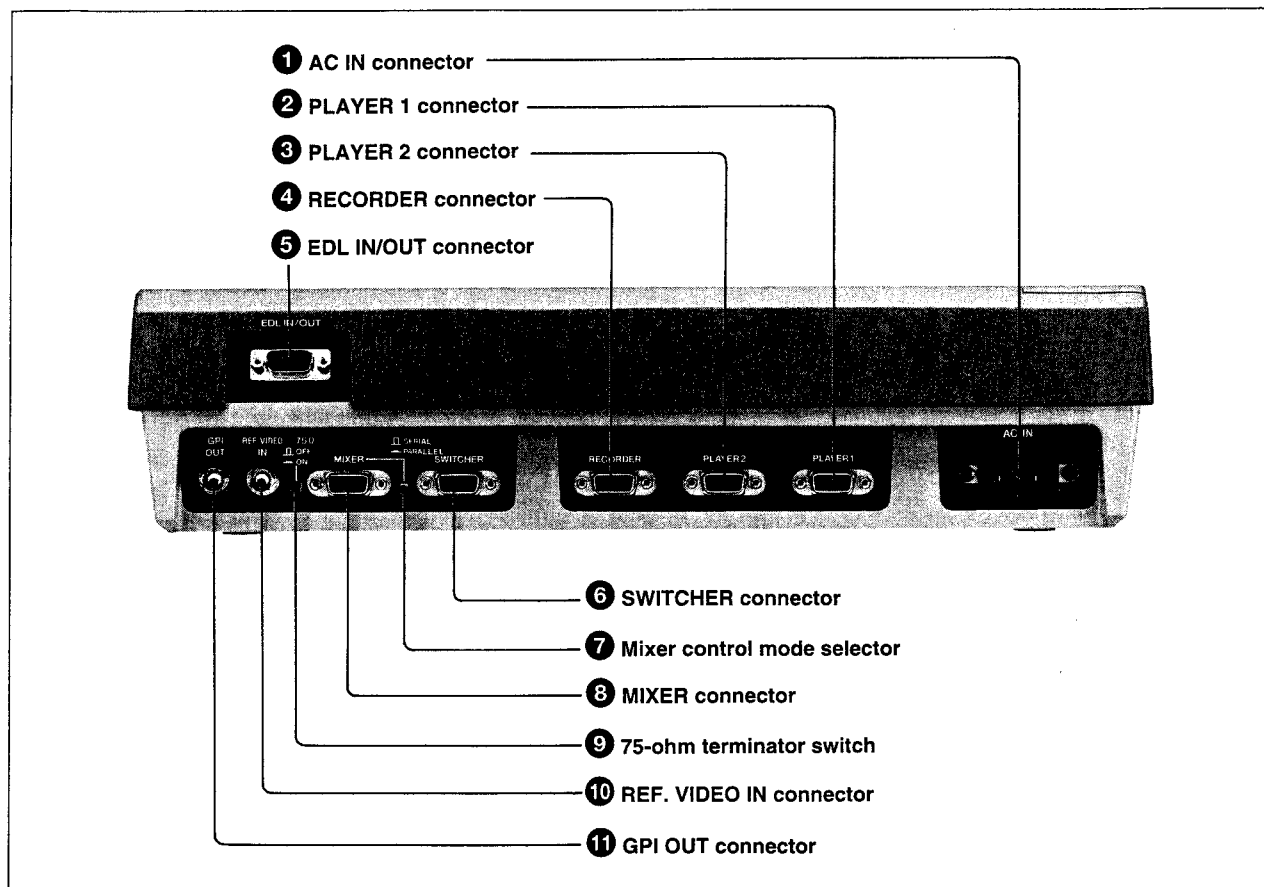
59 RVW/JUMP (review/jump) button

Press when you want to review an edit after recording it. The recorder plays back the edit. During playback, press once more to jump to a point 5 seconds before the OUT point.

60 ALL STOP button

Stops all VTRs. Press to stop a preview, automatic edit, or review.

Connector Panel



Connector panel

① AC IN connector

Connect the supplied power cord to an AC power outlet.

② PLAYER 1 connector (D-SUB 9-pin, female)

Connect a VTR as player 1, using a 9-pin remote cable (not supplied).

③ PLAYER 2 connector (D-SUB 9-pin, female)

Connect a VTR as player 2, using a 9-pin remote cable (not supplied).

④ RECORDER connector (D-SUB 9-pin, female)

Connect a VTR as the recorder, using a 9-pin remote cable (not supplied).

⑤ EDL IN/OUT connector (D-SUB 9-pin, male)

Connect to a personal computer or external I/O device, for input/output of EDL data.

⑥ SWITCHER connector (D-SUB 9-pin, female)

Connect a video switcher, using a 9-pin remote cable (not supplied).

⑦ Mixer control mode selector

Set to PARALLEL or SERIAL, according to the interface of the audio mixer connected to the MIXER connector ⑧.

⑧ MIXER connector (D-SUB 9-pin, female)

Connect an audio mixer. If the mixer has a 9-pin serial interface, connect with a 9-pin remote cable (not supplied). If it has a 15-pin parallel interface, connect with the Sony mixer control cable (not supplied).

⑨ 75-ohm terminator switch

Set to OFF if you have connected a T connector to the REF. VIDEO IN connector ⑩ for loopthrough output of reference video signals to other equipment. Otherwise set to ON.

Precautions

Safety precautions

Power

Supply 120V (for U.S. and Canada)/220 to 240V (for Europe) AC power.

Do not place or drop heavy objects on the power cord. Protect the cord from damage. Using a damaged power cord is dangerous.

Do not grasp the cord when pulling out of a power outlet. Grasp by the plug.

Do not disassemble

Do not open the cabinet. There is a danger of shock if you touch the parts inside the unit.

Do not drop foreign objects into the unit

Do not drop flammable or metal objects into the unit. Protect from water and liquids. Foreign objects dropped into the unit can cause malfunctions.

In case of trouble

If you notice unusual noises, smells, or smoke coming from the unit, turn it off immediately. Pull the power plug from the outlet, disconnect external equipment and contact your retailer or a Sony sales representative.

Usage precautions

Usage and storage conditions

Avoid using or storing the unit in places which are

- very hot or cold (usage temperature range 5°C to 40°C/41°F to 104°F).
- exposed to direct sunlight, or near heaters.
- damp or dusty.
- subject to severe vibrations.
- near equipment generating strong electromagnetic emissions.
- near transmitting stations generating strong radio waves.

Protect from shocks

Avoid dropping the unit or subjecting it to strong shocks.

Maintenance

Clean the cabinet and panels by wiping with a soft, dry cloth. Remove severe stains by wiping with a cloth moistened with a neutral solvent, then wipe with a soft, dry cloth. Do not clean with alcohol, benzine, thinner, or other volatile liquids. Doing so may damage the paint or finish.

Transporting the unit

When transporting the unit, protect from shocks by packing in the supplied carton or a comparable case.

Connections

You can connect the unit to the following kinds of external equipment.

External Equipment

External Equipment	Model
VTR	VTRs with 9-pin remote connector BVH, DVR, DVW, BVW, PVW, UVW, BVU, VO, EVO, SVO/SVP, PCM and LVR/LVA series
Video switcher	DFS-500, BVS-3000, DVS-8000, DVS-6000, DVS-2000 series BVS-V1201, BVS-A1201, BVS-1100, GVG model 100
Audio mixer	<ul style="list-style-type: none"> Audio mixers with 15-pin parallel interface MXP-29, MXP-290/290R, MXP-P390/P390R, VSP-A600/A600R Audio mixers with 9-pin serial interface MXP-S390/S390R, VSP-8000, DMX-E3000, DMX-E2000

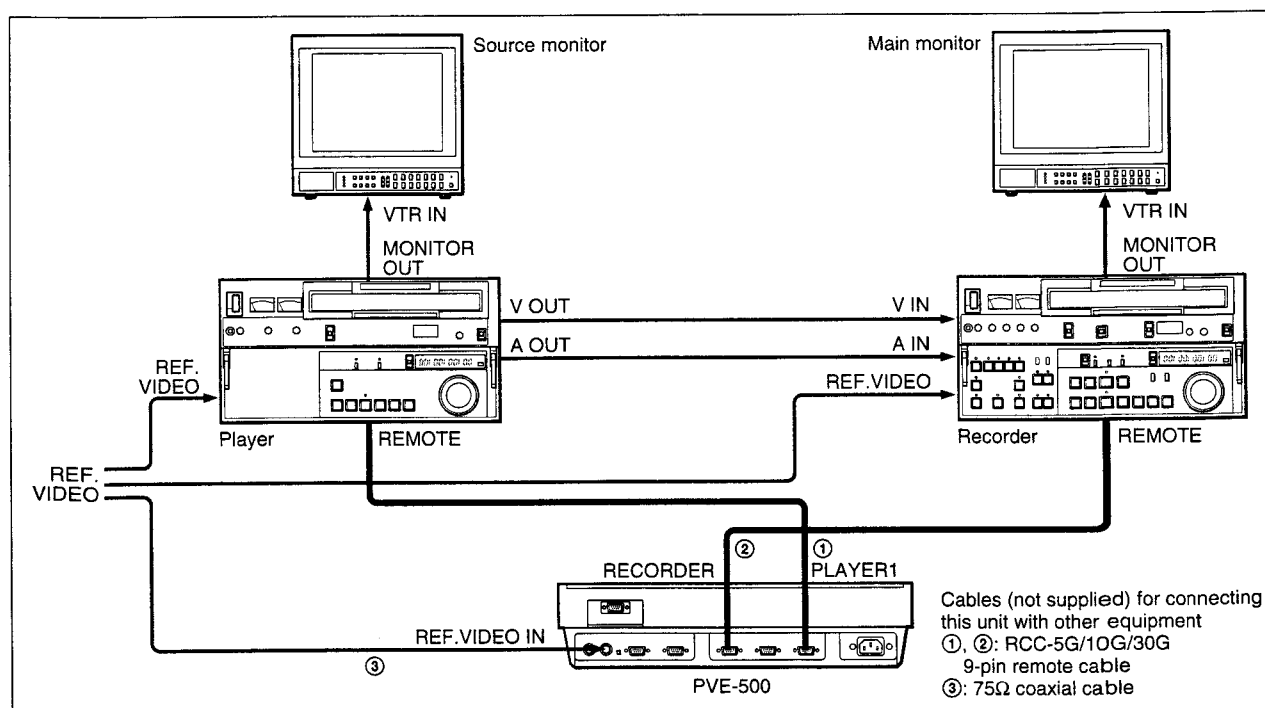
Optional cables must be purchased to connect external equipment. Depending upon the model, some features of the external equipment may not be supported.

For more information, contact a Sony sales representative.

The following will explain connections for three systems:

- A cut editing system with one player and one recorder.
- A cut editing system with two players, one recorder, a video routing switcher, and an audio routing switcher.
- An A/B roll system with two players, one recorder, a video switcher, and an audio mixer.

Cut editing system with one player and one recorder

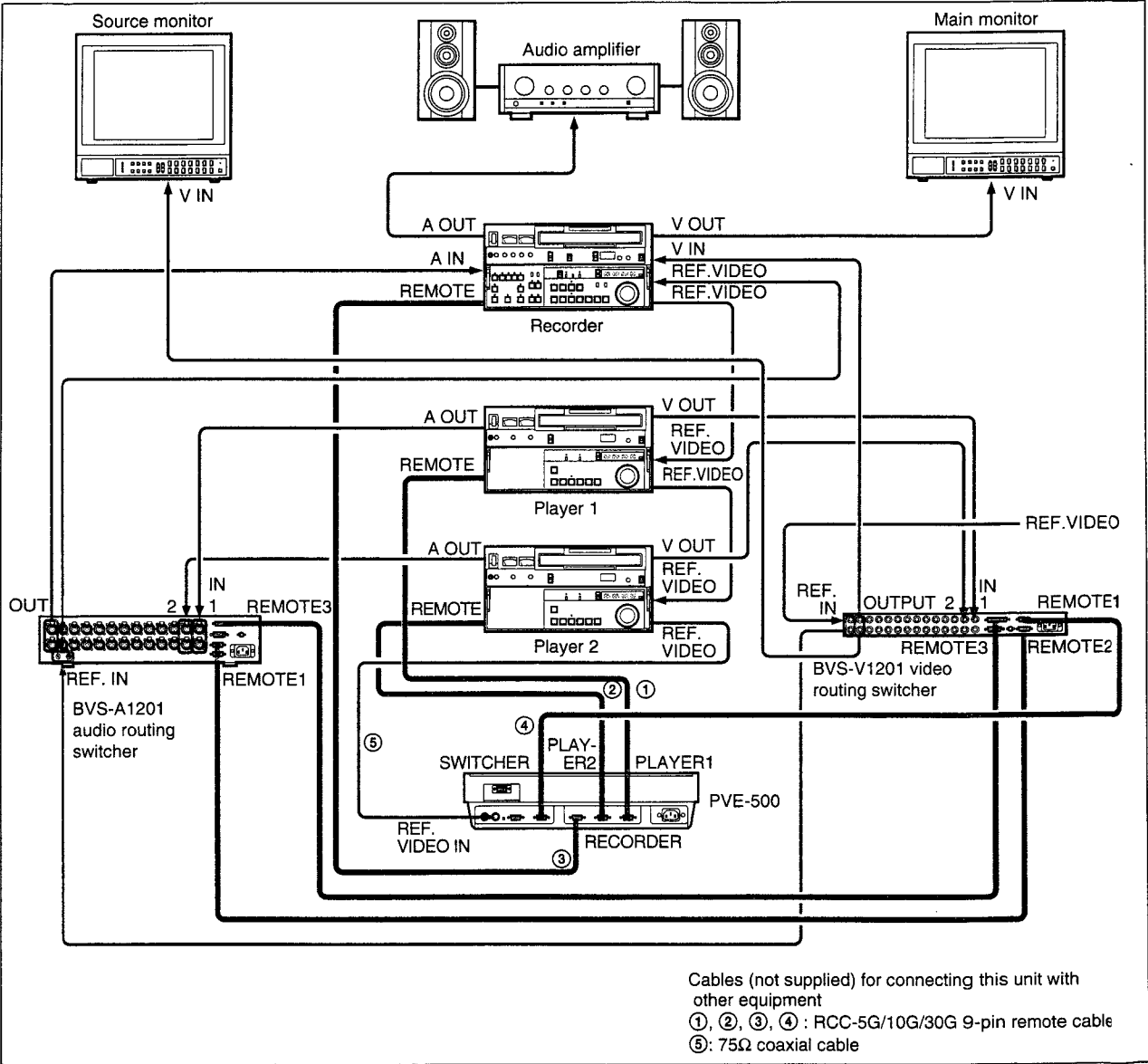


Cut editing system using one player and one recorder

Connections

Cut editing system with two players, one recorder, a video routing switcher, and an audio routing switcher

The illustration shows connections for a system using the BVS-V1201 video routing switcher and the BVS-A1201 audio routing switcher.



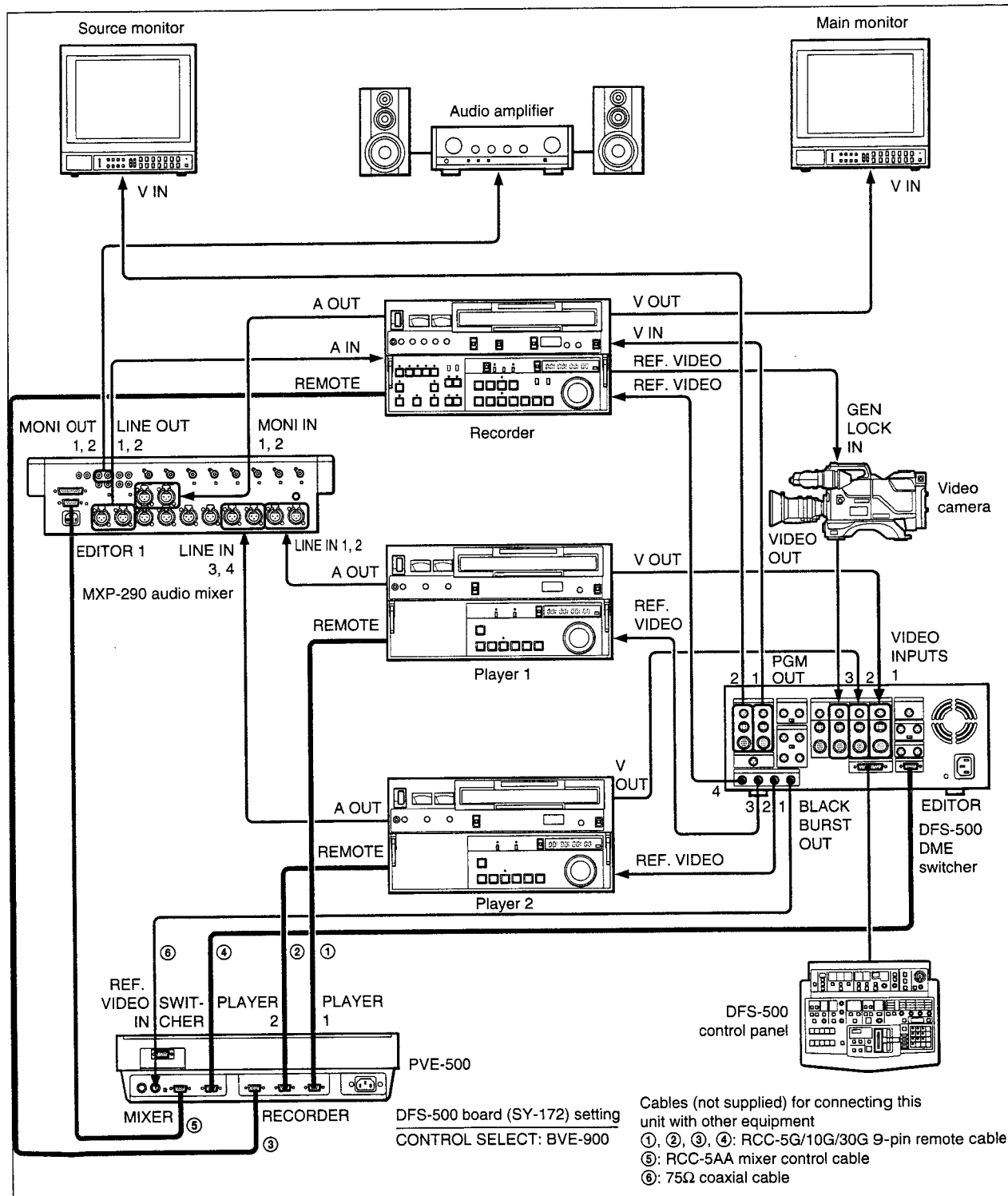
Cut editing system using a video routing switcher and an audio routing switcher

Set the board switches of the BVS-V1201 and BVS-A1201 as follows:

BVS-V1201 board settings				BVS-A1201 board settings		
IF-278 board		VSW-22 board		IF-278 board	ASW-18F board	
S1-1: OFF	S2-4: OFF	JW1: 1		S1-1: OFF	S2-4: ON	JW1: 1
S1-2: OFF	S2-5: OFF	JW2: 1		S1-2: ON	S2-5: OFF	JW2: 1
S1-8: ON	S2-6: OFF	JW4: 1		S1-8: ON	S2-6: OFF	JW3: 1
S2-1: ON	S2-7: OFF	JW5: 1		S2-1: OFF	S2-7: OFF	
S2-2: OFF	S2-8: OFF			S2-2: OFF	S2-8: OFF	
S2-3: OFF	JW1: 1			S2-3: ON	JW1: 2	

A/B roll system with two players, one recorder, a video switcher, and an audio mixer

The illustration shows connections for a system using the DFS-500 DME switcher and the MXP-290 audio mixer.



A/B roll system using the DFS-500 DME switcher and the MXP-290 audio mixer

Crosspoint for source selection buttons and equipment connected to MIXER or SWITCHER connectors (MXP-290 and DFS-500)

The table below shows the correspondences between this unit's source selection buttons and connectors of the MXP-290 audio mixer and the DFS-500 DME switcher.

Crosspoints for the AUX 3 (ENTRY + FROM TO) button are determined by the settings of setup menu items 22 (AUX 3 SWITCHER CROSSPOINT) and 33 (AUX 3 MIXER CROSSPOINT).

For more information, see "PVE-500 Setup (Initialization)" (page 3-8(E)).

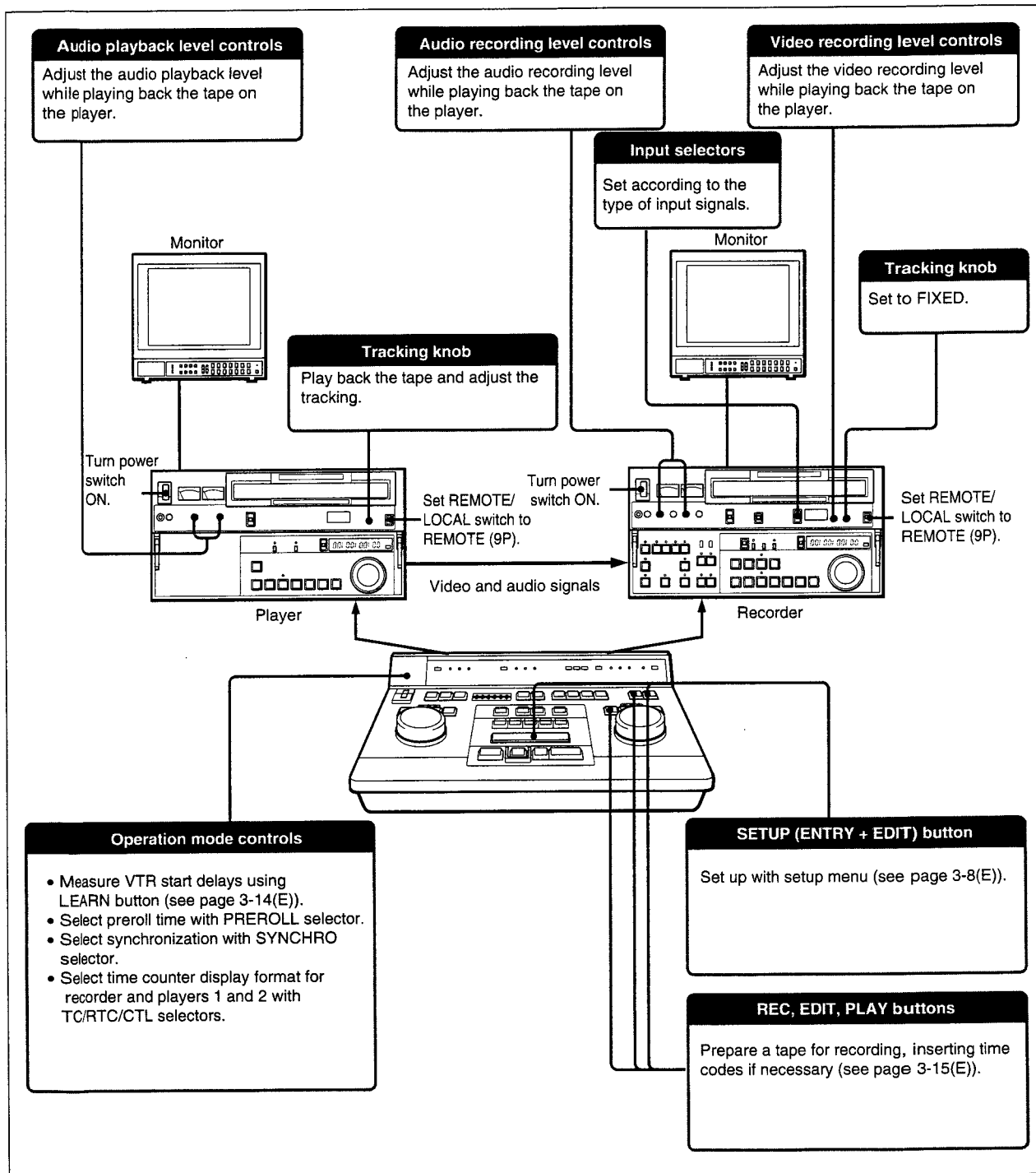
MXP-290 and DFS-500 crosspoints

Source selection button	Crosspoints	MXP-290 connector	DFS-500 connector
P1	1	LINE IN 1, 2	VIDEO INPUT 1
P2	2	LINE IN 3, 4	VIDEO INPUT 2
AUX 1 (ENTRY + P1)	3	LINE IN 5, 6	VIDEO INPUT 3
AUX 2 (ENTRY + P2)	4	LINE IN 7, 8	VIDEO INPUT 4

The INT VIDEO connector of the DFS-500 corresponds to crosspoint 0, or crosspoint 5 or above. For information about crosspoints and connectors of other mixers and switchers, contact a Sony service representative.

Preparations for Editing

Example: Cut editing system with one player and one recorder.



Preparations for editing

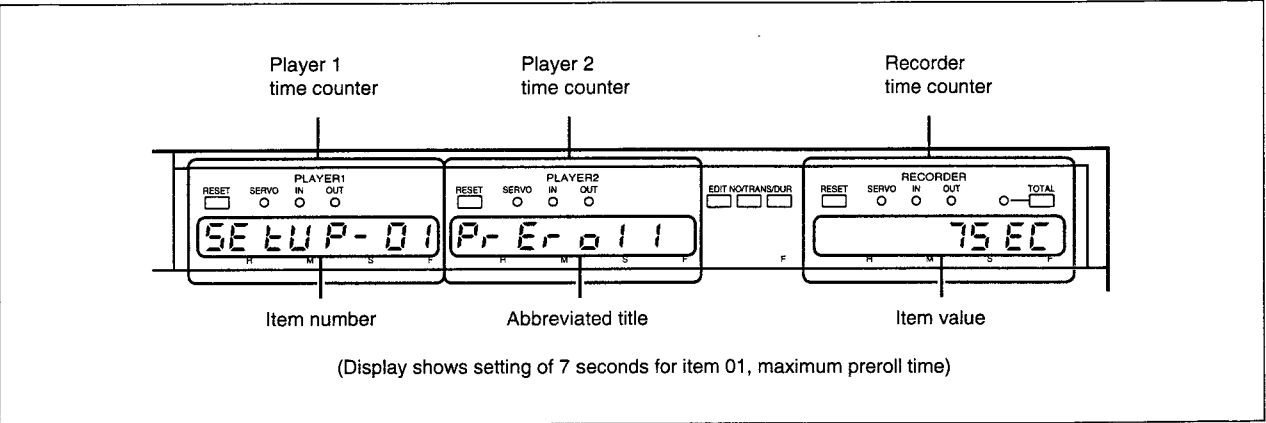
- For VTRs able to read VITC time codes, set to read both LTC and VITC time codes (set VITC/AUTO/LTC selector to AUTO). However, set to LTC if the VITC and LTC codes on the playback tape do not coincide.

- For VTRs which feature a built-in time code generator, set the following switches.
EXT/INT switch: INT
REGEN/PRESET switch: PRESET
FREE RUN/REC RUN switch: FREE RUN

For more information about VTR settings and adjustments, refer to your VTR's operation manual.

PVE-500 Setup (Initialization)

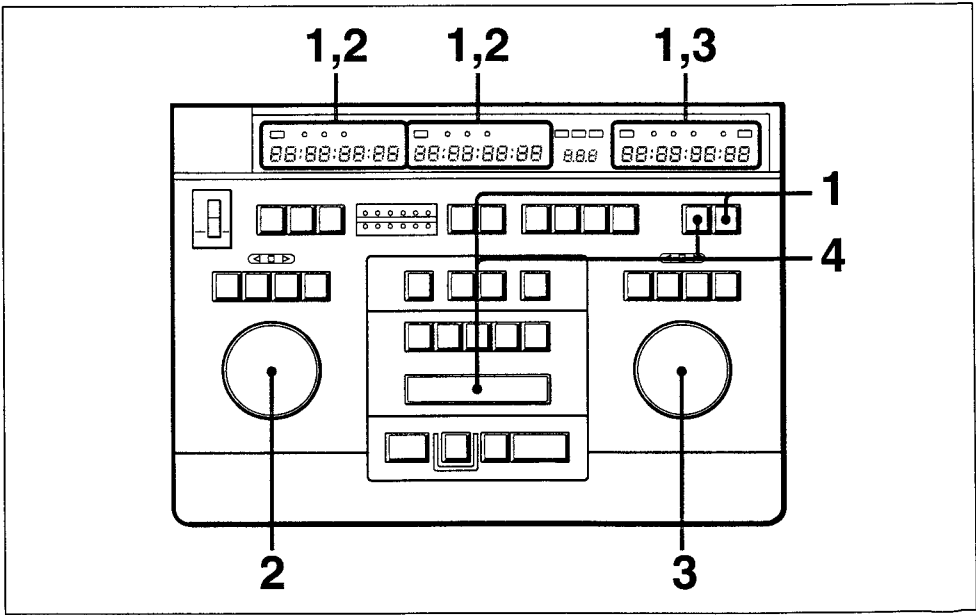
Except for items which are set using buttons and switches on the control panel, initialize using the search dial and setup menus. To use the setup menu, press the SETUP (ENTRY + EDIT) button to put the unit into setup mode. In setup mode, settings are displayed as follows. Data stored to the unit's EEPROM remains valid until updated again.



Setup menu display

Using the setup menu

Proceed as follows to use the setup menu.



Using the setup menu

-
- 1** Press the SETUP (ENTRY + EDIT) button.
The unit enters setup mode. The item number, abbreviated title, and value of the most recently changed item are displayed in the time counters of players 1 and 2 and the recorder.
 - 2** Rotate the player search dial until the player time counters display the item you want to change.
 - 3** Rotate the recorder search dial until the recorder time counter displays the value you want to set.
If the setting is different from the current setting, the time counter display flashes.
 - 4** Press the STORE (ENTRY + REC) button.
The data is written to the unit's EEPROM.
To make further settings, return to step **2**.
 - 5** To exit setup mode, press the SETUP (ENTRY + EDIT) button once more.

Preparations for Editing

Setup menu items

Item	Number	Abbreviated Title	Setting (factory setting underlined)
SIGNAL STANDARD VTR signal standard (NTSC or PAL/SECAM)	SEtUP-00	SignAL	30F: NTSC (30 frames) 25F: PAL/SECAM (25 frames) Factory setting For U.S., Canada: 30F For Europe: 25F
MAX PREROLL TIME Preroll time selected when PREROLL selector is set to 7	SEtUP-01	PrEroll	<u>7SEC</u> : 7 seconds 10SEC: 10 seconds
AUTO COUNTER RESET Whether or not the counter shall be reset automatically when the first edit point is entered, if the TC/RTC/CTL selector is set to RTC or CTL.	SEtUP-02	Auto Ctr	<u>OFF</u> : No automatic reset On: Automatic reset However, if the selector is set to CTL and the VTR is set for automatic edit point setting (with setup menu item SEtUP-05), the counter is not automatically reset.
TIME COUNTER RANGE The display range when the TC/RTC/CTL selector is set to RTC or CTL. The display range for total tape running time is also determined by this setting.	SEtUP-03	Ctr diSP	<u>10H</u> : From -9:59:59:29(24) to +9:59:59:29(24) 24H: From 00:00:00:00 to 23:59:59:29(24) (Values in parentheses for PAL/SECAM)
KEY & EDIT POINT BEEP Whether or not to beep after a valid key press, and when passing an edit point in preview or automatic editing.	SEtUP-04	bEEP	<u>OFF</u> : No beep On: Beep
AUTO EDIT POINT ENTRY In automatic editing, whether or not the OUT point of the previous edit is automatically set as IN point of the next edit.	SEtUP-05	Auto Ent	<u>OFF</u> : No automatic edit points rEC: Automatic edit points for recorder only ALL: Automatic edit points for all VTRs used in previous edit, except players in DT editing. If the previous edit was an A/B roll, FROM and TO are exchanged.
GPI OUT REFERENCE Whether GPI trigger signals shall be output at the effect transition start point (A/B roll editing only), at the recorder IN point, or at the preroll point.	SEtUP-06	GPI rEF	<u>EFF in</u> : Effect start point rEC in: Recorder IN point PrEroll in: Preroll point
GPI OUT POSITION Number of frames by which the actual GPI output shall be offset from the GPI output reference point. However, this item is ignored if the preroll point was chosen as the GPI output reference point.	SEtUP-07	GPI POSI	-60F/.../0F/.../60F: Number of frames, in range from -60 to +60
GPI PULSE WIDTH GPI pulse width (unit: frames). Choose SUSStAin to output pulses until the end of an automatic edit.	SEtUP-08	GPI PULS	<u>SUSStAin</u> : Until end of automatic edit. 1F/2F/.../10F: Number of frames, range from 1 to 10.
EDIT WITHOUT SERVO-LOCK Whether or not to abort the edit if servo-lock fails.	SEtUP-09	S-LO Edt	<u>On</u> : Abort edit. OFF: Do not abort edit.
EDIT WITHOUT SYNCHRONIZATION When the SYNCHRO selector is set to ON or ON/CF, whether or not to abort the edit if synchronization at +/- 0 frames fails.	SEtUP-10	Sync Edt	On: Abort edit. <u>OFF</u> : Do not abort edit.

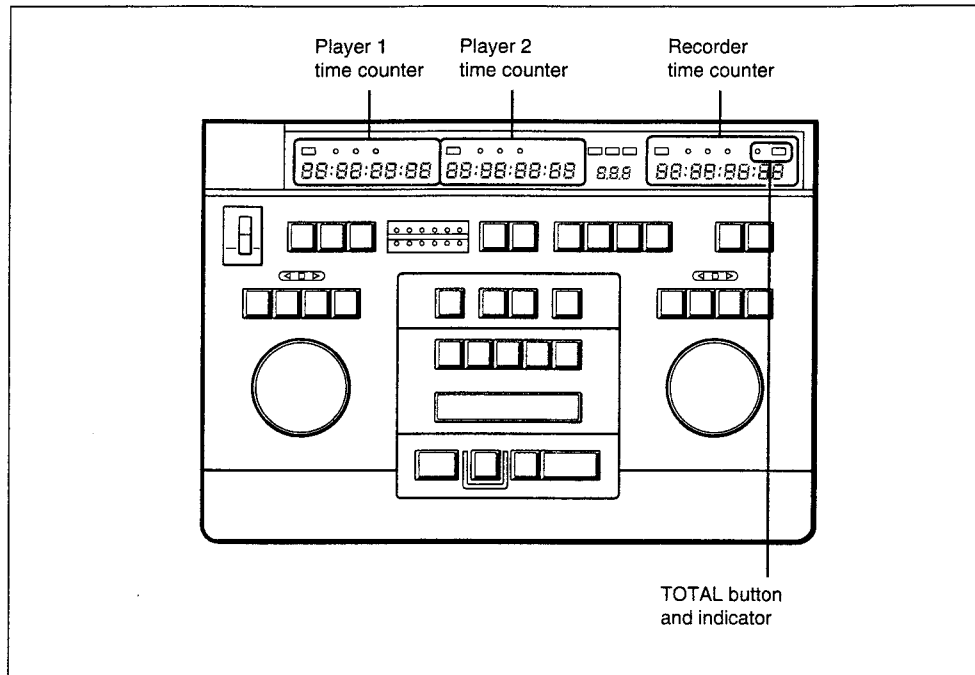
Item	Number	Abbreviated Title	Setting (factory setting underlined)
EDIT DELAY The recorder edit delay, or number of frames from the time when the editor issues a command until the time when the recorder begins recording. Correct the command timing as necessary. When editing in modes other than Auto, experiment and select the correct timing.	SEtUP-11	Ed dELAY	<u>Auto</u> : Adjusted automatically for the VTR device type ^{a)} . For devices not registered with this unit, the default value is three frames. 1F/2F/.../15F: Number of frames, in range 1 to 15 <i>You can display the VTR device type. For more information, see "To display the VTR device type" (page 3-13(E)).</i>
RECORDER START DELAY Whether the recorder start delay shall be the value registered for the VTR type, or the value returned by the learn function. <i>You can confirm whether or not a start delay value has been learned. See "To display the VTR device type" (page 3-13(E)).</i>	SEtUP-12	r dELAY	<u>Auto</u> : The registered value LEArn: The learned value However, the default value of five frames is used when <ul style="list-style-type: none"> the VTR type cannot be determined with this item set to Auto. no value has been learned with this item set to LEArn.
PLAYER 1 START DELAY Whether the start delay for player 1 shall be the value registered for the VTR type, or the value returned by the learn function.	SEtUP-13	P1 dELAY	<u>Auto</u> : The registered value LEArn: The learned value However, the default value of five frames is used when <ul style="list-style-type: none"> the VTR type cannot be determined with this item set to Auto. no value has been learned with this item set to LEArn.
PLAYER 2 START DELAY Whether the start delay for player 2 shall be the value registered for the VTR type, or the value returned by the learn function.	SEtUP-14	P2 dELAY	<u>Auto</u> : The registered value LEArn: The learned value However, the default value of five frames is used when <ul style="list-style-type: none"> the VTR type cannot be determined with this item set to Auto. no value has been learned with this item set to LEArn.
RECORDER SYNCHRONIZATION Whether to synchronize the recorder or not. Note Set to OFF when using a VTR which does not support synchronization.	SEtUP-15	rEC Sync	<u>On</u> : Synchronize if the source in cut editing or if the FROM source in A/B roll editing is a VTR. However, do not synchronize if the source VTR is in DT playback mode. OFF: Do not synchronize.
PLAYER 1 SYNCHRONIZATION Whether to synchronize player 1 or not. Note Set to OFF when using a VTR which does not support synchronization.	SEtUP-16	P1 Sync	<u>On</u> : Synchronize if recorder synchronization is set to OFF. If recorder synchronization is set to On, synchronize when player 1 is the TO source, or when player 1 is in DT playback mode. OFF: Do not synchronize.
PLAYER 2 SYNCHRONIZATION Whether to synchronize player 2 or not. Note Set to OFF when using a VTR which does not support synchronization.	SEtUP-17	P2 Sync	<u>On</u> : Synchronize if recorder synchronization is set to OFF. If recorder synchronization is set to On, synchronize when player 2 is the TO source, or when player 2 is in DT playback mode. OFF: Do not synchronize.

a) A code identifying the VTR type.

Preparations for Editing

Item	Number	Abbreviated Title	Setting (factory setting underlined)
PLAYER 1 MAX DT SPEED Maximum DT playback speed of player 1.	SEtUP-18	P1 SPEEd	<u>2</u> : 2 times normal speed. 3: 3 times normal speed.
PLAYER 2 MAX DT SPEED Maximum DT playback speed of player 2.	SEtUP-19	P2 SPEEd	<u>2</u> : 2 times normal speed. 3: 3 times normal speed.
SWITCHER TYPE Select the type of your switcher. Note If you select 1201, or change the selection from 1201 to another switcher, this unit must be powered off and on again before using the selection.	SEtUP-20	S tyPE	<u>500</u> : DFS-500 series 3000: BVS-3000 series 1100: BVS-1100 G100: GVG 100 1201: BVS-V1201, BVS-A1201
AUTO SNAPSHOT When using a DFS-500, whether or not to control snapshots automatically. Ignored unless SEtUP-25 (EDL MODE) is set to On. <i>For more information about the snapshot control, see "Controlling the DFS-500 Snapshot Function" (page 6-2(E))</i>	SEtUP-21	Auto SnP	<u>OFF</u> : No automatic control. On: Automatic control.
AUX 3 SWITCHER CROSSPOINT The crosspoint for the video switcher corresponding to the AUX3 (ENTRY + FROM TO) button in the source selection section.	SEtUP-22	AU3 S CP	<u>0</u> /1/2/.../99: Crosspoint, in range from 0 to 99. However, always 5 when using the BVS-V1201 or BVS-A1201, regardless of the setting of this item.
AUX 3 MIXER CROSSPOINT The crosspoint for the audio mixer corresponding to the AUX3 (ENTRY + FROM TO) button in the source selection section.	SEtUP-23	AU3 A CP	<u>0</u> /1/2/.../99: Crosspoint, in range from 0 to 99. However, must be set to 1, 2, 3 or 4 when using a mixer with a parallel interface.
USE EXT MON Whether to forcibly set the audio mixer's EXT MON to ON. Note When using the VSP-A600, the EXT MON connector ON/OFF switch cannot be set from the control panel. Therefore, set this item to On when monitoring recorder output through the EXT MON connector.	SEtUP-24	A600 USE	<u>OFF</u> : Do not set to ON. On: Set to ON.
EDL MODE Whether or not to save the EDL in internal memory (internal EDL mode). Note that all data in internal EDL memory is cleared when this item is set to external EDL mode.	SEtUP-25	EdL Cont	<u>OFF</u> : Use external EDL mode. On: Use internal EDL mode.
AUTO EDL CLEAR In internal EDL mode, whether or not data can be overwritten when the EDL becomes full (when edit 00 is saved). Overwriting begins by clearing the first edit (01), and continues from there toward the end of the list.	SEtUP-26	Auto Clr	<u>OFF</u> : Disable overwriting. On: Enable overwriting.
TIMECODE PRESET Preset value of the recorder's time code generator (hours digits).	SEtUP-27	tc PrSEt	<u>00H</u> /01H/.../23H: Hour from 00 to 23.
TIMECODE FRAME MODE (for NTSC only) Frame mode of the recorder's time code generator.	SEtUP-28	tc droP	<u>ndF</u> : Non-drop frame mode. dF: Drop frame mode.
TIME CODE OFFSET Whether to begin recording 20 seconds or 60 seconds before the preset time.	SEtUP-29	tc OFSEt	<u>-20</u> : 20 seconds -60: 60 seconds
MAXIMUM SHUTTLE SPEED The playback speed in shuttle mode when the search dial is rotated as far as possible.	SEtUP-30	SHtL SPd	<u>10</u> : 10 times normal speed 16: 16 times normal speed

To display the VTR device type

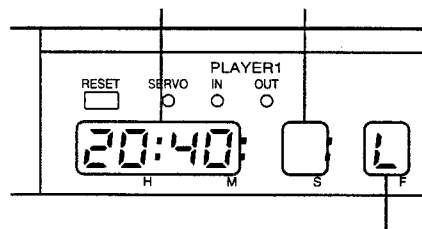


To display the VTR device type

In setup mode, press the TOTAL button, lighting the TOTAL indicator. The following information is displayed in the time counters of player 1, player 2, and the recorder.

Example: Player 1 device type display (PVW-2600 used as player 1)

The device type is displayed as a 4-digit hexadecimal number, or as "U" if this unit cannot determine the device type, otherwise blank. " - - - " if the type cannot be determined.



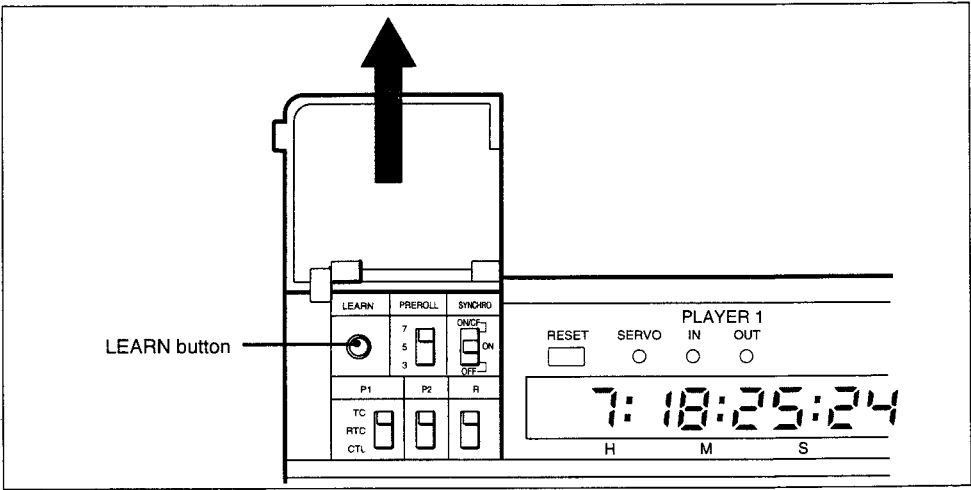
"L" if this unit's learn function has acquired a start delay value, otherwise blank.

VTR device type display

Measuring Start Delays

The amount of time which a VTR needs to achieve stable tape movement after receiving a start command is called the start delay. For precise synchronization between VTRs, you need to measure the start delay of each connected VTR. However, you do not need measure the start delays if the unit is able to determine the type of your VTRs, and if you have selected Auto under setup menus items 12, 13 and 14 (RECORDER START DELAY, PLAYER 1 START DELAY and PLAYER 2 START DELAY).

To measure start delays



To measure start delays

Insert a tape containing recorded material into each VTR and press the LEARN button. The tapes begin to run, and the unit measures the start delays. This information is saved in the unit's internal memory. It remains available for at least 100 hours after the unit's power is turned off (provided that the unit has been powered on for at least two hours).

Note

When VTR connections are changed, or when the previously measured start delay data has been lost, measure the start delays again. Note that start delays cannot be measured unless a tape is loaded in each powered-on VTR. To exclude a VTR from the measurement, disconnect the VTR or turn it off. During the measurement, tapes are rewound for about 5 seconds and played for about 7 seconds, so delays cannot be measured from the very beginning or the very end of a tape.

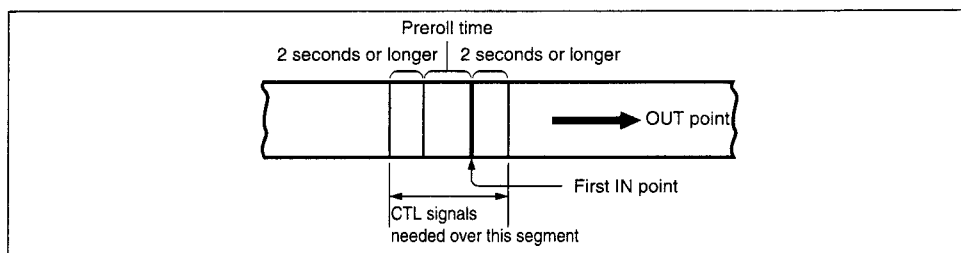
Preparing Tapes for Editing

Preparing tapes for recording

To prepare a master tape to record the results of an edit, use a video camera or reference signal generator to input color bars or black burst signals to a VTR which records them on the tape. The recording procedure differs according to the type of edit which you want to perform. As explained below, there are two kinds of edit: assemble editing and insert editing.

- **Simultaneous, sequential recording of all audio and video signals (assemble editing):**

To prepare a master tape for assemble editing, record CTL signals over at least the segment of the tape shown below.



Master tape for assemble editing

- **Simultaneous or separate insertion of selected audio and video signals (insert editing):**

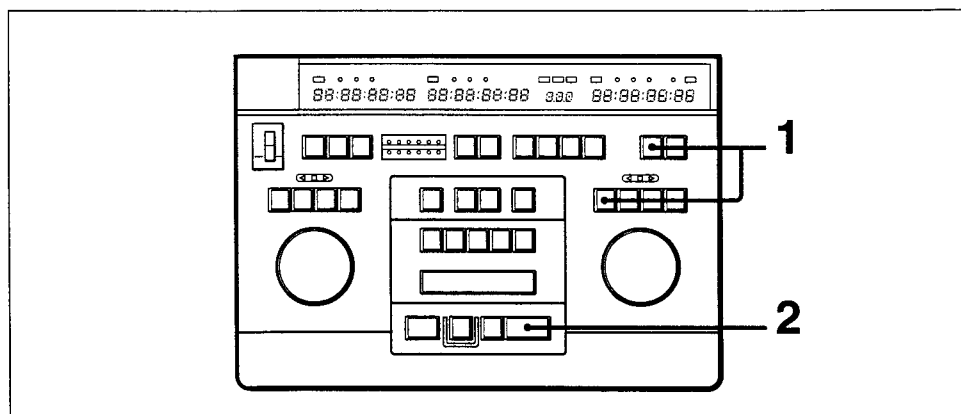
To prepare a master tape for insert editing, record CTL signals along the entire length of the tape.

For either assemble or insert editing, you will also need to record time code signals if you want to locate positions on the tape by means of time codes (time code editing).

For more information about insert and assemble editing, see "Assemble editing and insert editing" (page 4-3(E)).

To record CTL and time code signals on a blank tape

Insert a blank tape in the recorder beforehand. In this case, use the recorder's initial time code setting.



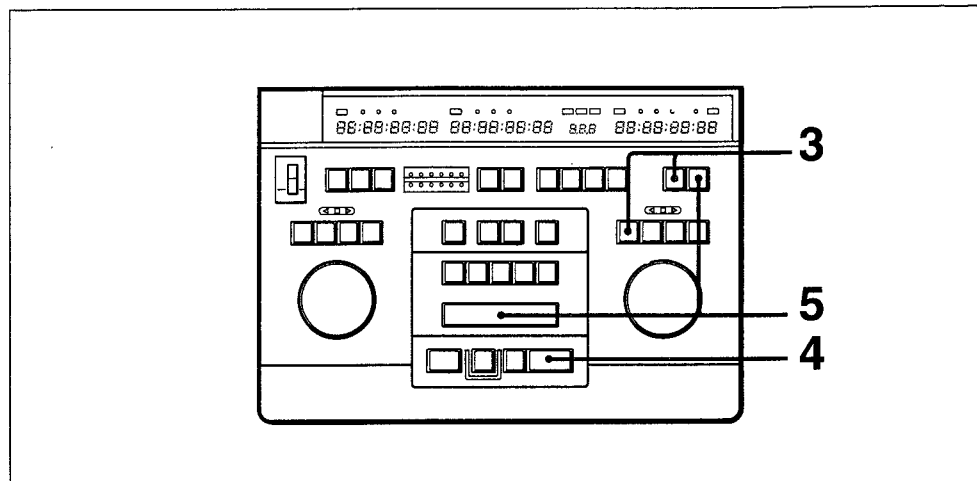
To record CTL and time code signals on a blank tape

Preparations for Editing

- 1 Press the REC button together with the PLAY button in the recorder operation control section.
Recording starts.
- 2 To stop the recording, press the ALL STOP button.

To record time code signals on a blank tape after setting the initial time code with this unit

Insert a blank tape in the recorder beforehand.



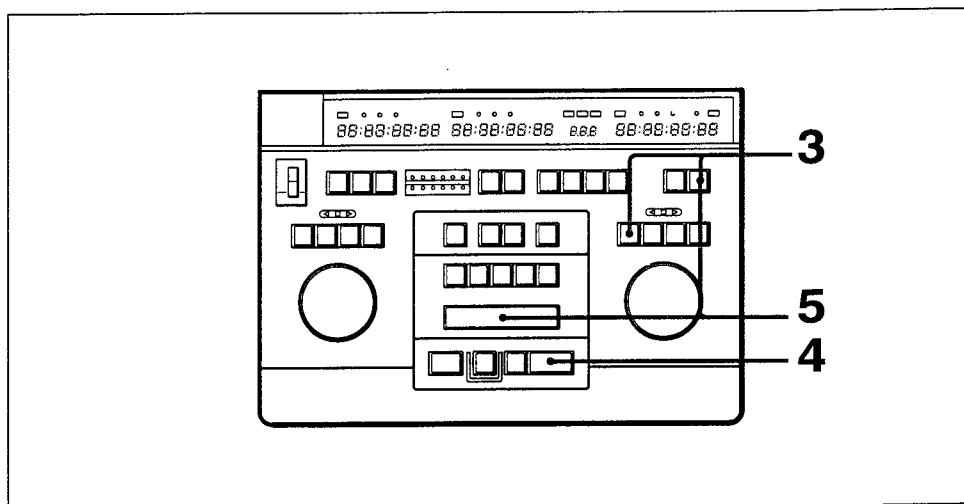
To record time code signals on a blank tape after setting initial time code on this unit

- 1 Use the setup menu (*page 3-8(E)*) to set the initial time code. Select setup menu item SEtUP-27 (abbreviation: tc PrSEt), and rotate the recorder search dial to set the time code.
After setting the time code, do not exit the setup menu.
- 2 Select setup menu item SEtUP-28 (abbreviation: tc droP) to select drop frame mode or non-drop frame mode.
Do not exit the setup menu.
- 3 While still in the setup menu, press the REC button together with the PLAY button in the recorder operation control section.
Recording begins with a time code approximately 20 seconds or 60 seconds (depending upon the setting of setup menu item SEtUP-29) before the initial time code selected in step 2.
- 4 To stop the recording, press the ALL STOP button.
- 5 After you have finished recording, press the SETUP (ENTRY + EDIT) button to exit the setup menu.

To record new time codes on a recorded tape in insert mode

Time codes must be recorded continuously on tapes used in time code editing. If you want to record new time codes on a tape which already contains audio or visual program materials.

Insert the tape in the recorder and proceed as follows. For this operation, it makes no difference whether the edit mode is set to insert or assemble.



To record new time codes on a recorded tape in insert mode

- 1** Use the setup menu (page 3-8(E)) to set the initial time code. Select setup menu item SEtUP-27 (abbreviation: tc PrSEt), and rotate the recorder search dial to set the time code.
After setting the time code, do not exit the setup menu.
- 2** Select setup menu item SEtUP-28 (abbreviation: tc droP) to select drop frame mode or non-drop frame mode.
Do not exit the setup menu.
- 3** While still in the setup menu, press the EDIT button together with the PLAY button in the recorder operation control section.
Recording begins with a time code approximately 20 seconds or 60 seconds (depending upon the setting of setup menu item SEtUP-29) before the initial time code selected in step 2.
- 4** To stop the recording, press the ALL STOP button.
- 5** After you have finished recording, press the SETUP (ENTRY + EDIT) button to exit the setup menu.

Note

If the recorder and player tapes have different formats, and you want to record time code signals on the player tape in insert mode, temporarily connect the player VTR to the RECORDER connector. In this case, the player VTR must have a time code insert function.

Chapter 4

Basic Editing

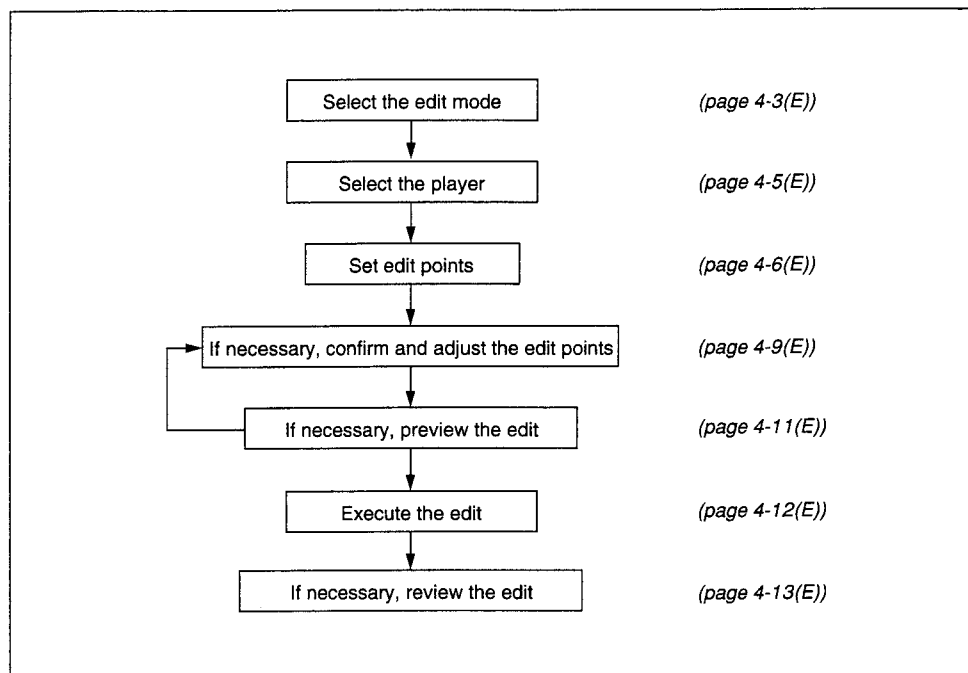
— Cut Edits

This chapter explains how to perform basic cut edits, using one player and one recorder, for instantaneous switching between program sources.

Standard Editing Session	4-2 (E)
Selecting the Edit Mode	4-3 (E)
Selecting the Player	4-5 (E)
Setting Edit Points	4-6 (E)
Confirming and Adjusting Edit Points	4-9 (E)
Previewing the Edit	4-11 (E)
Executing the Edit	4-12 (E)
Reviewing the Edit	4-13 (E)

Standard Editing Session

The following diagram illustrates the flow of a standard editing session using this unit.



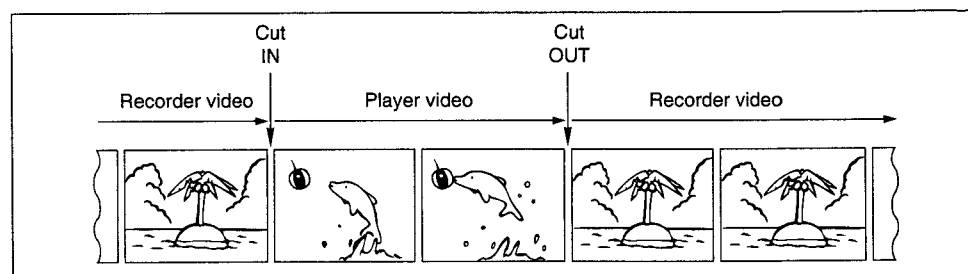
Standard editing session

This chapter will explain how to perform cut edits using one player and one recorder.

For instructions on how to perform A/B roll editing using two players, see Chapter 5 "Editing with Two Players — A/B Roll Edits."

What is cut editing?

Cut editing is a technique for switching instantaneously from one scene to another.



Cut editing

In assemble mode, audio and video signals are switched at the same time. In insert mode, you can switch audio and video separately.

For more information about the insert and assemble modes, see "Assemble editing and insert editing" (page 4-3(E)).

Selecting the Edit Mode

Select assemble mode or insert mode.

Assemble editing and insert editing

What is assemble editing?

Assemble editing is a technique for simultaneous, sequential recording of video, audio (channels 1 and 2), time code and control signals on a master tape. It is a convenient way to record scenes one after the other on a new tape.

Note

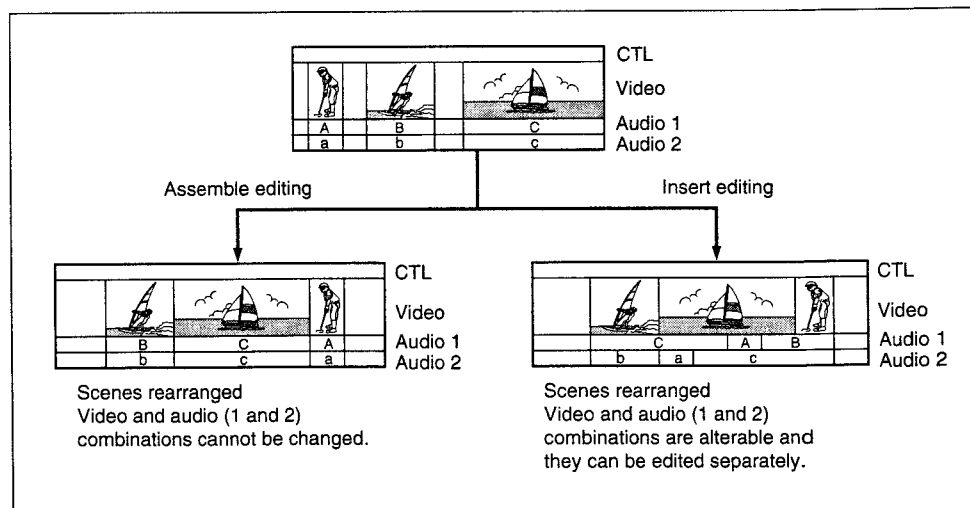
If you begin an assemble edit at a point midway through an already recorded tape, data will be erased across the entire width of the tape a few seconds after the recorder's OUT point. Video and audio signals recorded in this section will be lost, causing picture break up. If you wish to avoid this, use insert editing instead of assemble editing.

What is insert editing?

Insert editing is a technique for inserting video, audio (channels 1 and 2), time code and control signals into a master tape, either together or separately. It assumes that you have already recorded control or time code signals across the entire length of the tape. Use insert editing when you want to:

- add music or narration to an edited video program.
- add video to an edited audio program.
- take a tape recorded in assemble mode and replace certain scenes with new ones.

In insert mode, you can insert new scenes without causing picture break up after the recorder OUT point.

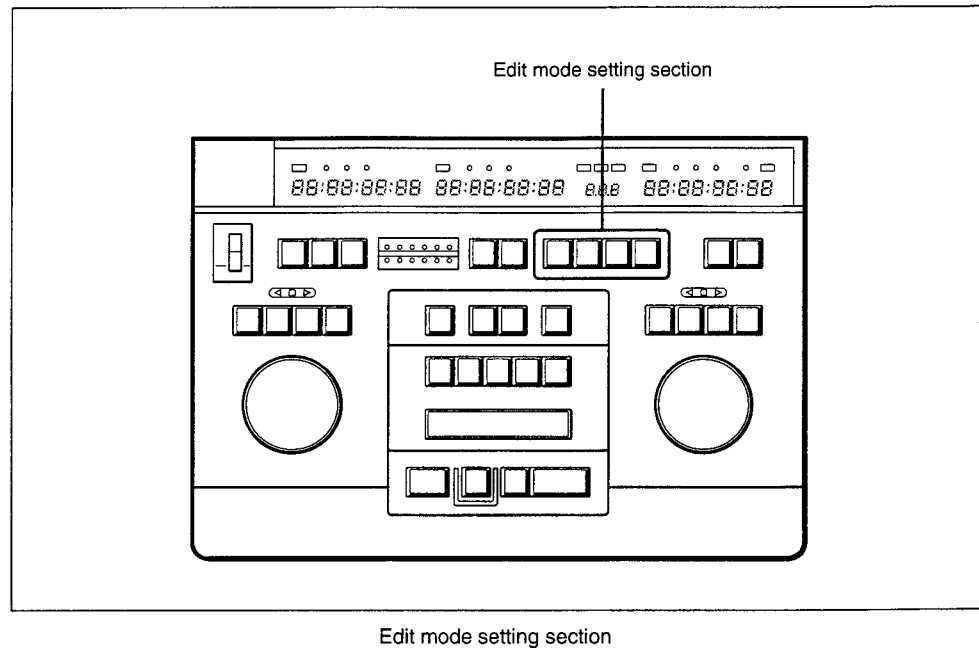


Assemble and insert editing

Selecting the Edit Mode

To select the edit mode

Select the edit mode using the buttons in the edit mode setting section.



To select assemble mode

Press the ASMBL button. The button lights.

If any of the insert mode buttons (V, A1, A2) are lit, press them so that they go out before pressing the ASMBL button.

To select insert mode

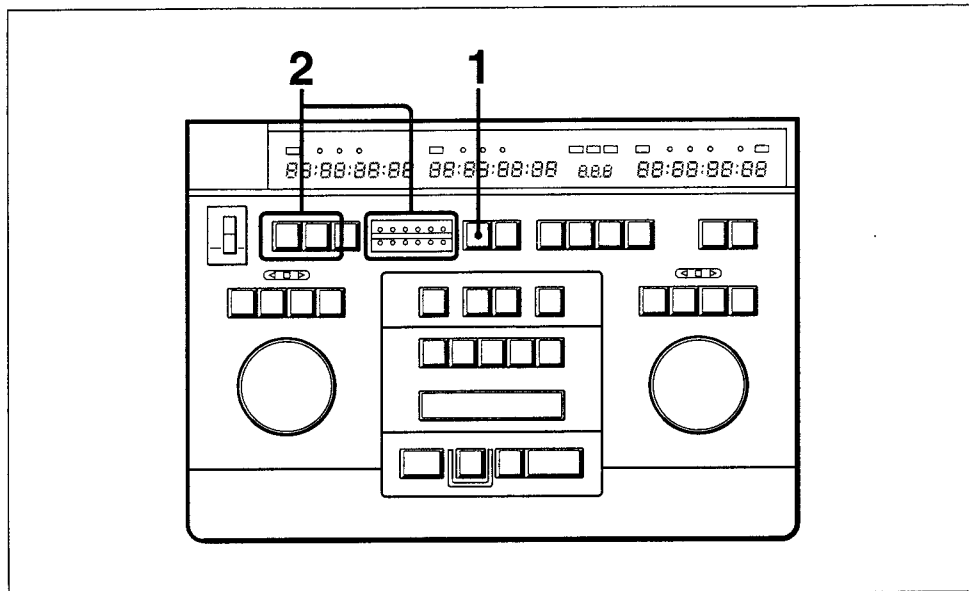
Press one or more of the video (V), audio 1 (A1) and audio 2 (A2) buttons, depending on the signals you want to insert. The buttons light. If the ASMBL button is lit, press it so that it goes out before pressing the insert mode button.

Selecting the Player

Select the VTR connected to the PLAYER 1 or PLAYER 2 connector (P1 or P2) as the player.

To select the player

Proceed as follows to select the player.



Selecting the player

- 1 Verify that the A/B button is out.

If the A/B button is lit or flashing.

If lit, press it once. If flashing, press it twice. The button goes out.

- 2 Press the P1 or P2 button to select the VTR connected to the PLAYER 1 or PLAYER 2 connector.
The button lights. In addition, the red P1 or P2 indicator lights in the FROM row of the FROM TO indicators.

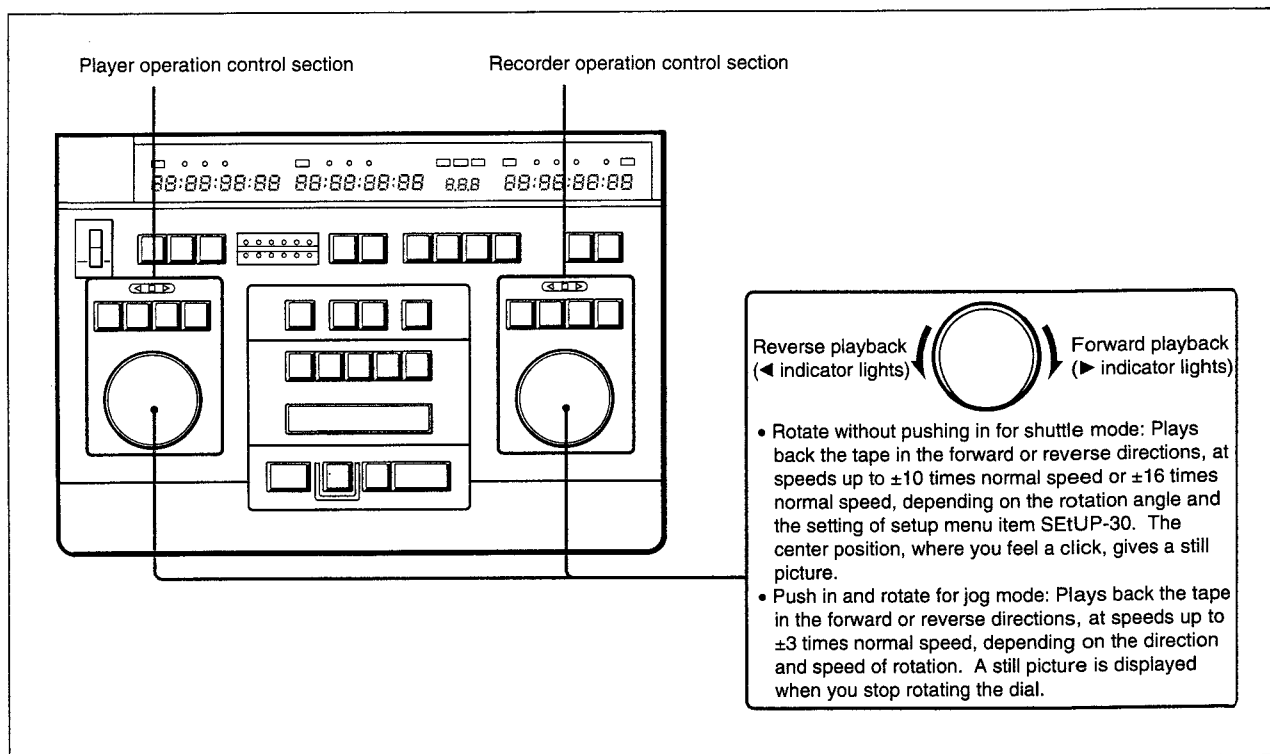
*A duration must be set when using an auxiliary source (AUX 1, 2, 3).
For more information, see "Using Auxiliary Sources" (page 6-5(E)).*

Setting Edit Points

Set the IN and OUT points for the recorder and player. When you execute a cut edit, playback between the player's IN and OUT points is recorded between the recorder's IN and OUT points. To set an edit point, search for the desired scene while viewing player or recorder playback on the monitor. At the desired scene, stop the playback and set the IN point to the tape position shown in the time counter.

Searching for a scene on the tape

While viewing player or recorder playback on the monitor, use the search dials and the buttons in the player and recorder operation control sections to search for the desired scene. They control VTR tape movement remotely, just like VTR's own controls (see Chapter 2 "Names and Functions of Parts").



Player and recorder operation control sections

Note

The range of search dial playback speeds may differ for some VTRs.

To view a still picture at the desired scene

During normal playback: Press the STILL button.

During shuttle mode playback: Return the search dial to the center position where it clicks.

During jog mode playback: Stop rotating the search dial.

If still playback continues beyond a certain time

The connected VTR may automatically cancel still playback. To resume still playback, press the STILL button on this unit.

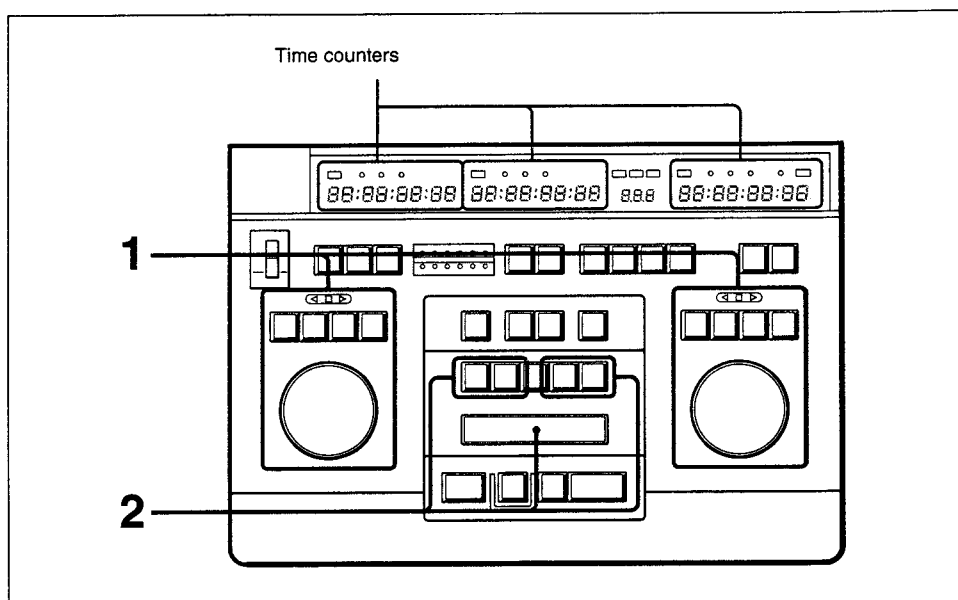
To set an edit point

In cut editing, player duration is the same as recorder duration. So as soon as you set three edit points, the unit automatically sets the remaining fourth edit point.

Note

If you set all four edit points yourself, and the player's duration does not match the recorder's duration, the recorder's OUT point is given priority, and the player's OUT point is ignored.

Proceed as follows to set an edit point.



To set an edit point

- 1** Find the desired scene while viewing the playback of the player or recorder.
- 2** When you find the scene, press the ENTRY button at the same time as the IN or OUT button which corresponds to the edit point you want to set (see chart below).
 - It makes no difference whether you press the ENTRY button first or the IN/OUT button first, as long as you hold both down together.
 - You can set player and recorder edit points at the same time by pressing the ENTRY and IN/OUT buttons for both player and recorder.

Edit point	Button
Player IN point	Player IN button
Player OUT point	Player OUT button
Recorder IN point	Recorder IN button
Recorder OUT point	Recorder OUT button

Above the player or recorder time counter, the IN or OUT indicator corresponding to the edit point lights. If there are any edit points remaining to be set, the indicators for those points begin to flash.

Setting Edit Points

- 3** Repeat steps **1** and **2** until you have set the necessary three out of four edit points for the player and recorder.

When you set the third edit point

The PREVIEW and AUTO EDIT buttons begin to flash, to inform you that it is now possible to conduct a preview or execute the edit.

For more information about previews, see “Previewing the Edit” (page 4-11(E)). For more information about execution, see “Executing the Edit” (page 4-12(E)).

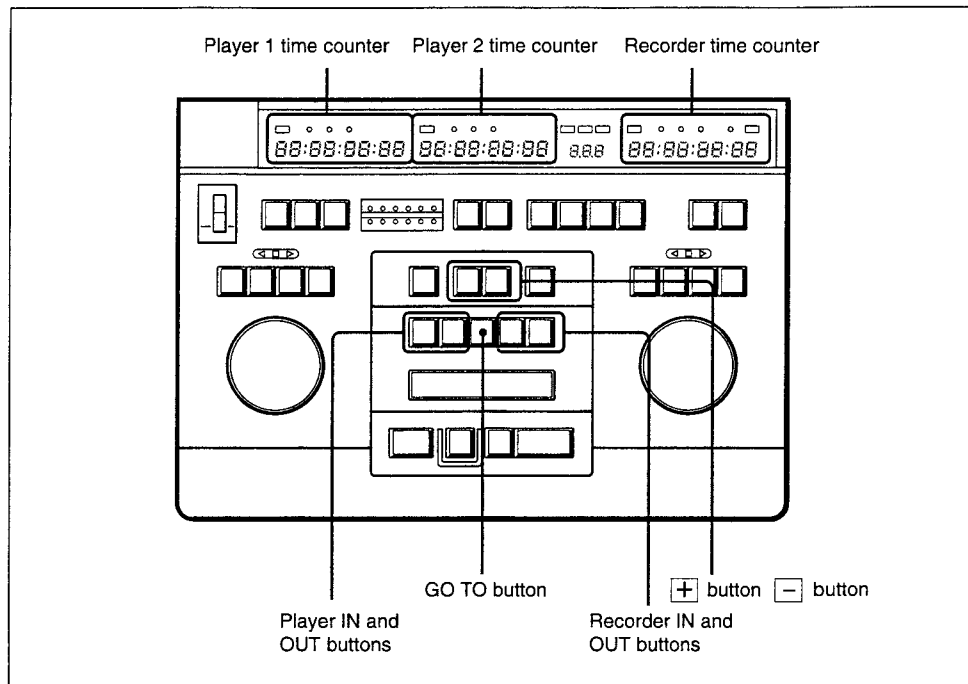
If the edit mode buttons begin to flash

If you set an edit point without first selecting an edit mode, all of the edit mode buttons begin to flash. Refer to “Selecting the Edit Mode” (page 4-3(E)), and set the edit mode.

Confirming and Adjusting Edit Points

This section explains how to confirm and adjust edit points, and how to confirm the duration.

The following illustration shows the controls used to confirm and adjust edit points.



Controls used to confirm and adjust edit points

To confirm an edit point

Press the IN/OUT button corresponding to the edit point you want to confirm (*see chart below*). You can confirm player and recorder edit points at the same time by pressing more than one button.

Edit point	Button
Player IN point	Player IN button
Player OUT point	Player OUT button
Recorder IN point	Recorder IN button
Recorder OUT point	Recorder OUT button

As long as you hold the button down, the edit point is displayed in the player or recorder time counter. Edit points which have been set automatically are displayed in the same way, but the display flashes. During this time, the corresponding IN or OUT indicator flashes at high speed.

Confirming and Adjusting Edit Points

To view an edit point scene

While pressing the GO TO button, press the IN/OUT button corresponding to the scene you want to view.

The tape moves to that scene and a still picture is displayed.

It makes no difference whether you press the GO TO button first or the IN/OUT button first, as long as you hold both down together.

You can also view player and recorder edit points at the same time, or cue up automatically calculated edit points.

However, this function cannot be used to cue up the recorder's OUT point in assemble mode editing.

To confirm duration

Press the player IN and OUT buttons together, or the recorder IN and OUT buttons.

As long as you hold the buttons down, the duration is displayed in the player or recorder time counter. If an edit point has been set automatically, the display flashes. During this time, the corresponding IN or OUT indicators flash at high speed.

Hold down the buttons for all four edit points to confirm player and recorder duration at the same time.

To adjust edit points by one frame at a time

Press the IN or OUT button for the edit point you want to adjust. While holding it down, press the **+** button to move the edit point one frame forward, or the **-** button to move it one frame backward.

It makes no difference whether you press the IN/OUT button first or the **+** / **-** button first, as long as you hold both down together.

You can also adjust player and recorder edit points at the same time, by pressing the appropriate buttons.

To adjust edit points continuously

Hold the IN/OUT and **+** / **-** buttons down.

To move an edit segment by moving both the IN and OUT points

While holding down both the IN and OUT buttons, press one of the **+** / **-** buttons.

To delete edit points

While pressing the IN/OUT button for the edit point to be deleted, press the RESET button above the corresponding time counter.

To delete both the IN and OUT points

Press the RESET button above the corresponding time counter.

Note

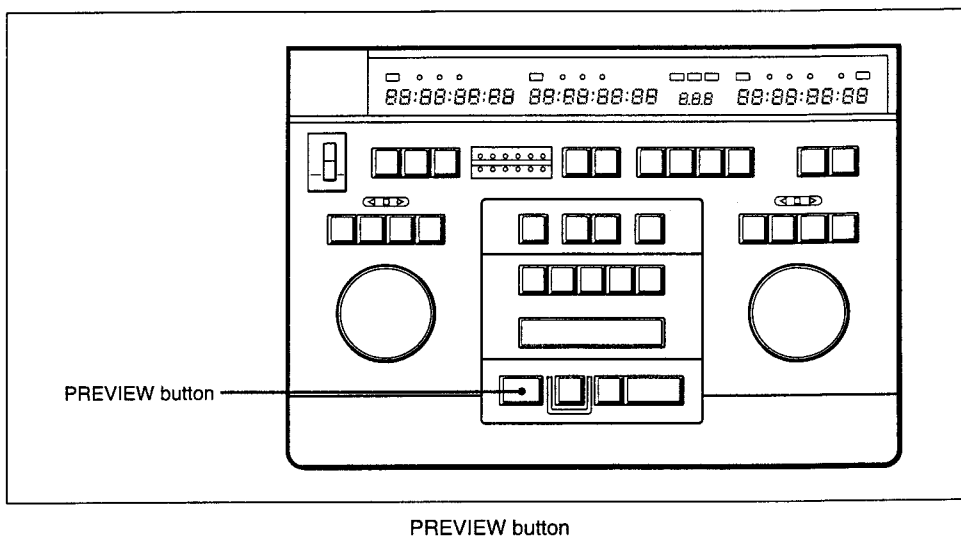
If the TC/RTC/CTL selector is set to RTC or CTL, pressing the RESET button normally resets the time counter. To delete both the IN and OUT points without resetting the time counter, hold both the IN and OUT buttons down while you press the RESET button.

Previewing the Edit

The preview function allows you to conduct a rehearsal before executing the edit. In a preview, the player and recorder run exactly as they do during edit execution, and the results are displayed on the monitor, but the edit is not recorded. If a preview is not needed, you can skip this step and proceed directly to edit execution.

To execute a preview

Press the PREVIEW button.



When you execute a preview

- From the preroll point to the IN point, and from the OUT point to the postroll point (about two seconds past the OUT point), recorder playback is displayed.
- The player and recorder stop at the postroll point.
- However, in assemble mode the recorder tape stops one second after the IN point, and recorder playback does not resume after the player passes the OUT point.

To restart the preview being executed

Press the PREVIEW button again.

To move the OUT point backward during the preview

When you reach the scene where you wish to set the new OUT point, press the recorder OUT button while holding down the ENTRY button.

In insert mode, the new OUT point is set at the position on the recorder tape where you pressed the OUT and ENTRY buttons. The preview ends. In assemble mode, the new OUT point is calculated and set automatically.

To interrupt a preview and execute an automatic edit

Press the AUTO EDIT button.

To stop a preview

Press the ALL STOP button.

To recall the contents of the previous preview

Press the LAST EDIT button.

Each time you press the button, the current preview is replaced by the previous preview, or vice versa.

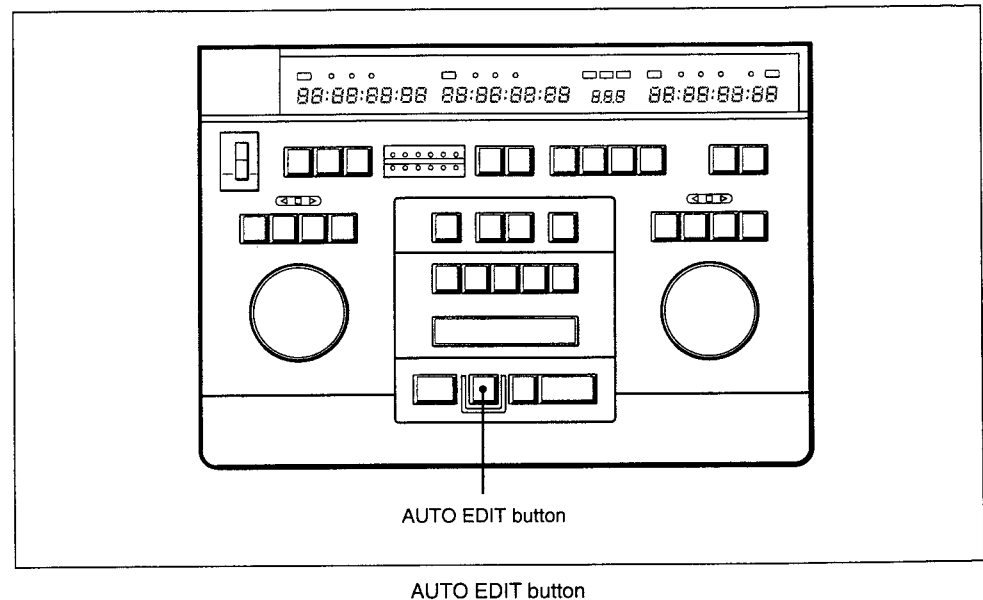
For more information about this function, see "Recalling the previous previews — the last edit buffer" (page 7-4(E)).

Executing the Edit

After you have finished making the necessary settings, you can execute the edit automatically.

To execute the edit

Press the AUTO EDIT button.



When you execute an edit

- The recorder runs to the postroll point, about two seconds past the OUT point, then rewinds to the OUT point and stops.
- The RVW/JUMP button starts flashing, to inform you that you can now conduct a review.

For more information about reviews, see “Reviewing the Edit” (page 4-13(E)).

To move the OUT point backward during the edit

When you reach the scene where you wish to set the new OUT point, press the AUTO EDIT button again, or press the recorder OUT button while holding down the ENTRY button.

The point where you pressed the button is set as the new OUT point for both player and recorder. The edit ends.

To stop an edit

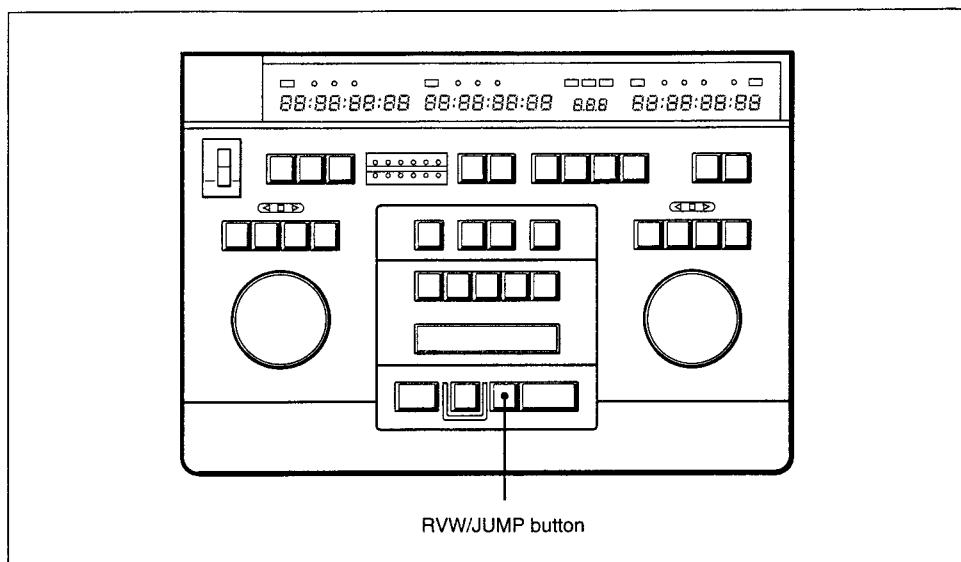
Press the ALL STOP button.

Reviewing the Edit

If necessary, you can review the edit by viewing the recorded results on the monitor.

To review the edit

After executing the edit, press the flashing RVW/JUMP button.



The recorder plays back the edit from the preroll point to the postroll point (about two seconds past the OUT point).

After the review, the recorder rewinds to the OUT point and stops.

If you set an edit point for the next edit, the RVW/JUMP button stops flashing.

To jump to the vicinity of the OUT point during a review

After passing the IN point, press the RVW/JUMP button once more.

The tape plays in fast forward mode to a point about five seconds before the OUT point, then returns to normal playback. The review continues up to the postroll point.

Note

The jump function is not available when:

- the tape has already played to a point within five seconds of the OUT point.
- the duration is less than 10 seconds.

To stop a review

Press the ALL STOP button.

Chapter 5

Editing with Two Players — A/B Roll Edits

Editing the signals of two players is called A/B roll editing. This chapter will explain how to perform A/B roll editing using switchers and mixers connected to this unit.

The explanation assumes that you already know how to operate your video switcher and/or audio mixer, and that you are familiar with this unit's basic operating procedures. The diagram "A/B roll editing session" of this chapter (*page 5-3(E)*) provides references to Chapter 4 "Basic Editing — Cut Edits" in case you wish to review steps omitted from the explanation.

For information about how to operate the switcher or mixer connected to this unit, please refer to the manual supplied with the equipment.

Outline	5-2 (E)
Selecting FROM and TO Sources	5-4 (E)
Setting Edit Points	5-6 (E)
Setting a Transition Time	5-7 (E)

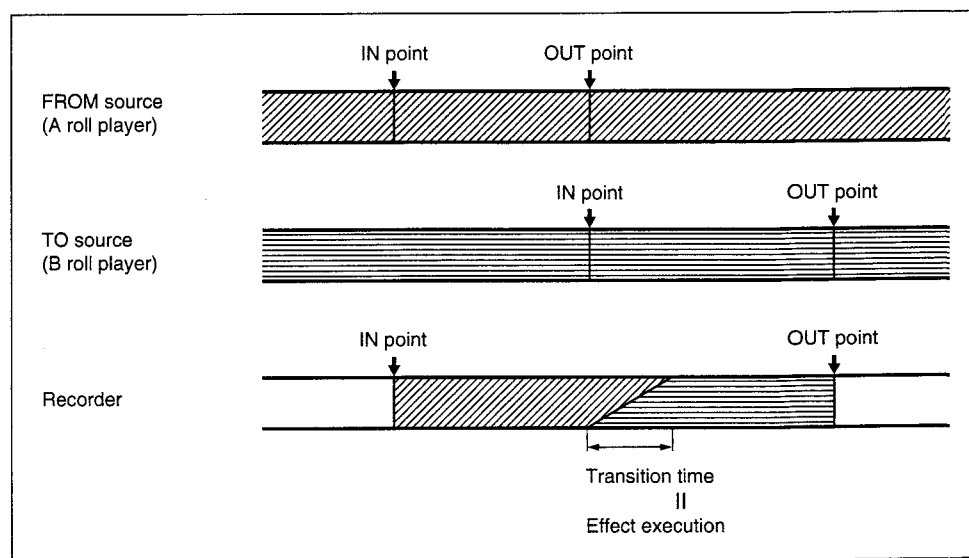
Outline

If you connect a video switcher such as the DFS-500 to this unit, you will be able to take advantage of special effects such as wipes and dissolves in A/B roll editing.

For more information about the special effects supported by your switcher, please refer to its operation manual.

Basic A/B roll editing

The basic operation in A/B roll editing is a switch from FROM source playback to TO source playback, using an effect which continues for a specified transition time.



Basic A/B roll editing

When conducting an A/B roll edit with this unit and a connected switcher, set the edit mode, edit sources (players), edit points, and transition time using this unit. Select the effect type using the switcher.

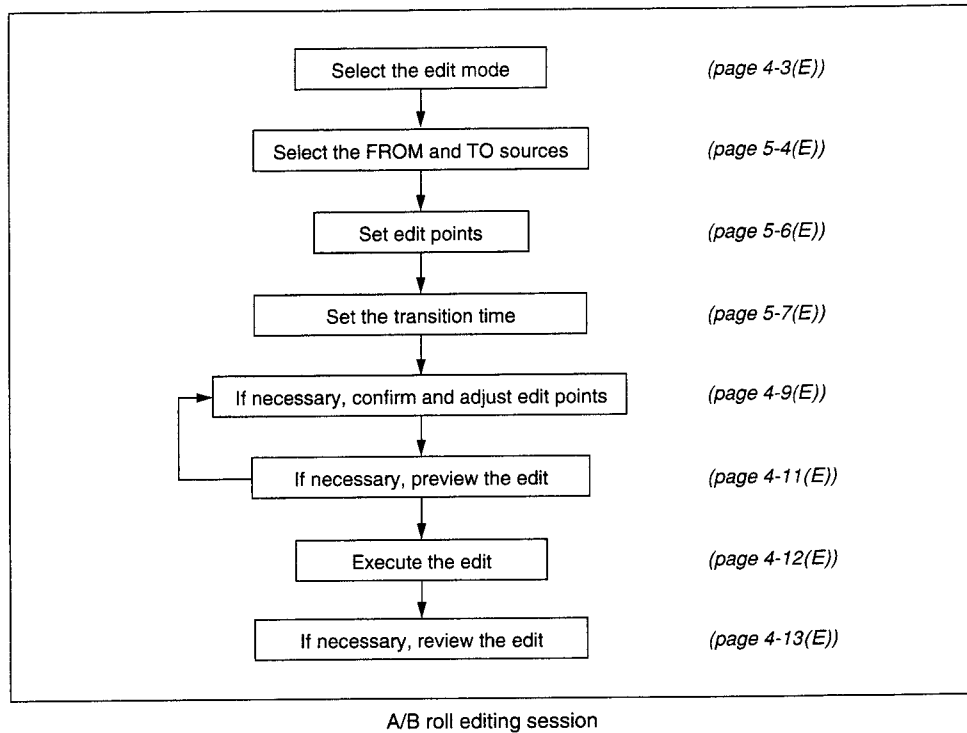
A/B roll editing session

A/B roll editing differs from cut editing with respect to the following points:

- Two players (the FROM and TO sources) are specified.
- Edit points are set separately for the two players.
- An effect transition time is set.

In other respects, A/B roll editing uses the same basic procedures as cut editing.

The following diagram illustrates the flow of an A/B roll editing session.



Confirm special effects before execution

Confirm that necessary settings, including effect selection, have been made correctly on the switcher or mixer side before executing a preview or an edit.

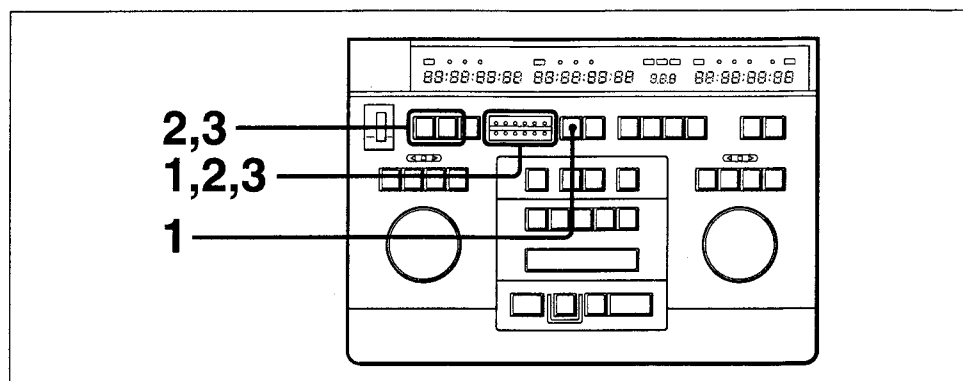
Note on references to Chapter 4

For steps in the above diagram which refer to Chapter 4, note that A/B roll editing differs from cut editing in the following ways.

- **Confirming and adjusting edit points**
Before adjusting or confirming player edit points, it is necessary to select the FROM or TO source by pressing the P1 or P2 button. The button lights to indicate the selected source.
- **Moving an OUT point during a preview**
If you wish to move an OUT point backward during a preview, wait until after the transition. Then, when the player reaches the desired scene, press the recorder OUT button while holding down the ENTRY button.
- **Moving an OUT point during an edit**
If you wish to move an OUT point backward during an edit, wait until after the transition. Then, when the player reaches the desired scene, press the AUTO EDIT button or press the recorder OUT button while holding down the ENTRY button.

Selecting FROM and TO Sources

Proceed as follows to select the FROM and TO sources.



Selecting FROM and TO sources

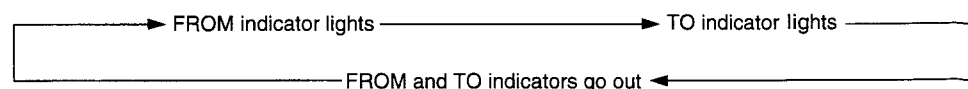
- 1** Press the A/B button.
The button lights. If it is flashing, it stops flashing and lights.
The green indicator in the FROM row of the FROM TO section lights.
- 2** Press the P1 or P2 button to select the FROM source.
 - The button lights. At the same time, the red P1 or P2 indicator in the FROM row lights.
 - The green FROM indicator goes out, and the green TO indicator lights.

*A duration must be set when using an auxiliary source (AUX 1, 2, 3).
For more information, see "Using Auxiliary Sources" (page 6-5(E)).*
- 3** Select the TO source by pressing the P1 or P2 button, whichever is not lit.
 - The button lights. At the same time, the red P1 or P2 indicator in the TO row lights.
 - The green TO indicator goes out. Both of the green indicators are now out.

*A duration must be set when using an auxiliary source (AUX 1, 2, 3).
For more information, see "Using Auxiliary Sources" (page 6-5(E)).*

How the FROM and TO indicators change

The green FROM and TO indicators change in the following order each time you press the FROM TO button. The green FROM and TO indicators are never lit at the same time.



Note

Except while you are selecting FROM and TO sources, make sure that the green FROM and TO indicators are not lit. The lighted state means that FROM or TO sources can be changed, which can lead to errors.

To change the FROM or TO source

- 1** To change the FROM source, press the FROM TO button, lighting the green FROM indicator.
To change the TO source, press the FROM TO button again, lighting the green TO indicator.
- 2** Press the P1 or P2 button to select the player.

Setting Edit Points

You can set IN and OUT points for the FROM source, the TO source, and the recorder in any order you like. As soon as you set the fifth edit point, the unit automatically sets the sixth.

To set an edit point

Set edit points just as you would for a cut edit, except that when setting player edit points you need to press the P1 or P2 buttons to select the FROM or TO source.

For more information about setting player and recorder edit points, see “Setting Edit Points” (page 4-6(E)) in Chapter 4.

As soon as you have set five out of the necessary six edit points, the PREVIEW and AUTO EDIT buttons begin to flash, to inform you that it is now possible to conduct a preview or execute the edit.

Note

If you set all six edit points yourself, and the sum of the TO and FROM durations does not match the recorder’s duration, then the recorder’s OUT point is given priority, and the TO source’s OUT point is ignored.

If you do not set an OUT point for the FROM source

Until you execute an edit or preview, the edit point displayed in the FROM source time counter will be an automatically calculated value. When you execute the preview or edit, the unit automatically sets the value of the FROM source IN point as the OUT point, and the effect begins immediately from the FROM source IN point.

Setting a Transition Time

Select the transition time, as the number of frames from the point where a connected switcher begins to execute a special effect to the point where the special effect ends. When the effect is executed, the audio and video playback of the FROM source will be gradually replaced by the audio and video playback of the TO source.

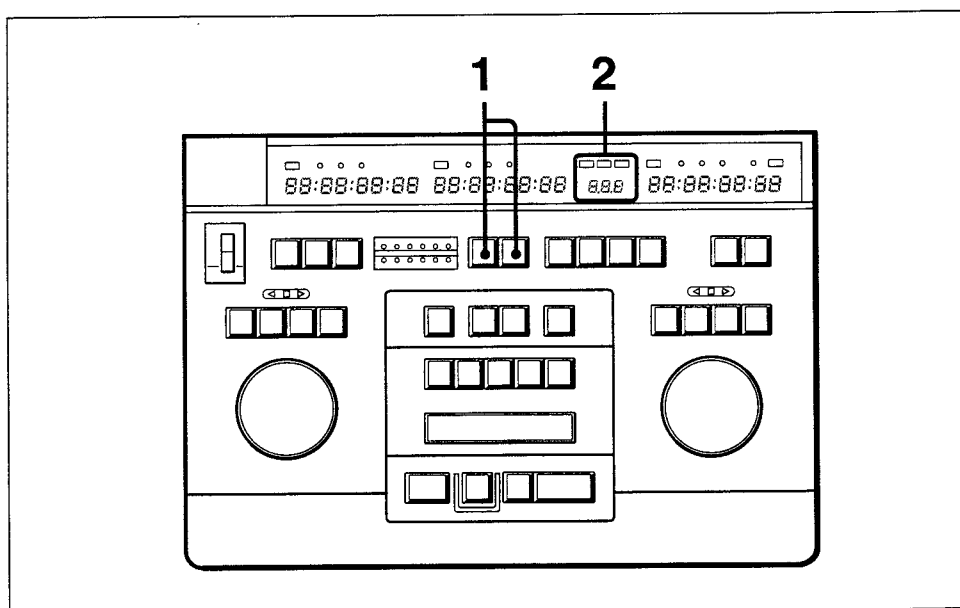
Relation between frame count and real time

- NTSC: 29.97 frames per second
- PAL/SECAM: 25 frames per second

The maximum transition time which may be set with this unit is 999 frames.

To set the transition time

Proceed as follows.



To set the transition time

- 1** Verify that the A/B button is lit, then press the TRANS button. If the TRANS button is flashing, press it so that it lights.
- 2** The transition time is displayed in the EDIT NO./TRANS/DUR display. Use the three EDIT NO./TRANS/DUR buttons to enter the desired number of frames.

Chapter 6

Advanced Editing

This chapter explains advanced techniques not covered in previous chapters.

Controlling the DFS-500 Snapshot Function	6-2 (E)
Controlling the DFS-500 During an A-Roll Edit	6-2(2) (E)
Previewing Immediately After Setting IN Points	
— Quick Editing	6-3 (E)
Resuming Edit After Setting Player IN Point	
— Butt Editing	6-4 (E)
Using Auxiliary Sources	6-5 (E)
Setting Separate Audio and Video IN Points	
— Split Editing	6-7 (E)
Editing Still and Variable-Speed Playback	
— DT Editing	6-9 (E)
Setting Transition Points During Preview or Edits	
— SYNC Roll Editing	6-12 (E)
Controlling External Equipment via	
the GPI Interface	6-13 (E)
Manual Editing	6-14 (E)

Controlling the DFS-500 Snapshot Function

If you have connected a DFS-500 DME switcher, and are editing in internal EDL mode, you can link snapshots of the DFS-500 control panel to edits stored in this unit's EDL. Each time you register an edit in the EDL, the DFS-500 saves a snapshot of its control panel. Later, when you recall the edit from the EDL, the DFS-500 automatically restores the state of its control panel.

See page 7-3(E) for more information about internal EDL mode, and page 7-2(E) for more information about edits.

To control the DFS-500 snapshot function

Set setup menu item 21 (AUTO SNAPSHOT) to On.

The unit will automatically link EDL edits and DFS-500 snapshots, in the following way.

- Whenever you register an edit in the EDL, the DFS-500 registers a snapshot using the edit number.
- The DFS-500 also registers a snapshot immediately before execution of an automatic edit.
- When you recall the edit from the EDL, the DFS-500 retrieves the snapshot with the same number from its snapshot register.

Controlling the DFS-500 During an A-Roll Edit

The PVE-500 is able to use the DFS-500's A-roll function, allowing you to use special effects even when editing with only one player. The effects are applied using source video and recorder freeze video.

To perform A-roll editing, proceed as follows.

- 1** Connect the recorder output to the DFS-500 VIDEO INPUT 3 or VIDEO INPUT 4 connector.
- 2** In A/B roll mode, select AUX 1 (VIDEO INPUT 3 on the DFS-500) or AUX 4 (VIDEO INPUT 4 on the DFS-500) as the FROM source.

Note

It is not possible to perform A-roll editing in sync roll mode.

- 3** Set the FROM source duration to 0.

For more information about setting the duration, see "Using Auxiliary Sources" (page 6-5(E)).

- 4** On the DFS-500 operation panel, select the FREEZE mode (either field freeze or frame freeze).

- 5** Conduct a preview as necessary, and execute the edit.
The recorder video changes to freeze video at a point 3 fields (field freeze) or 2 frames (frame freeze) before the recorder IN point, and the edit is executed.

Notes

- If you have selected insert mode for channel 1 audio (A1) or channel 2 audio (A2), a transition is made from the input to the audio mixer's AUX1 or AUX2 connector to the audio of the TO source.
- There may be some picture breakup at the preroll point or when the recorder crosspoint is selected if the recorder has been set to enter E-E mode when stopped. To avoid this, set the recorder to enter PB (playback) mode when stopped.
- There may be some shift in the picture at the IN point if you are using a recorder with a built-in time base corrector (TBC). To avoid this, select DELAYED SYNC mode on the recorder side.

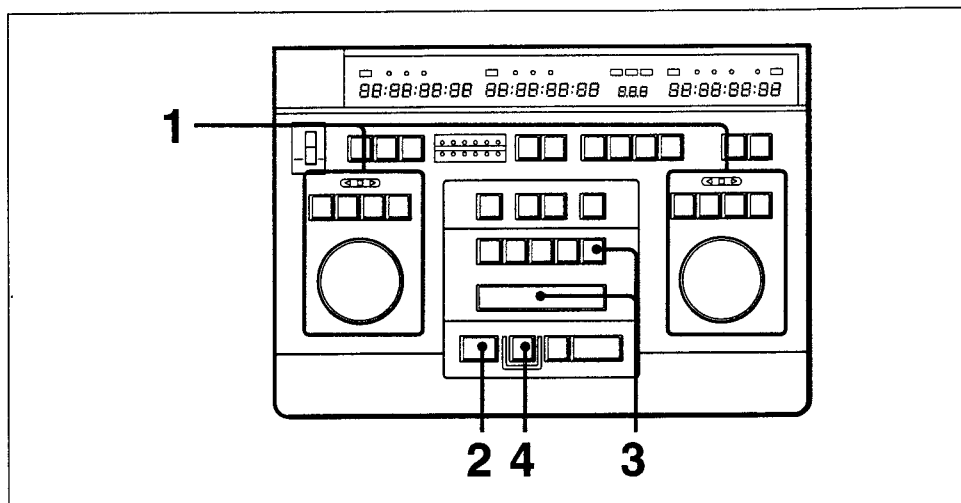
Previewing Immediately After Setting IN Points — Quick Editing

In cut and SYNC roll editing, you can increase your editing efficiency by choosing to preview as soon as you set IN points. Or you can skip the preview and proceed immediately to an automatic edit.

This function is not available in A/B roll editing.

For more information about SYNC roll editing, see “Setting Transition Points During Preview or Edits — SYNC Roll Editing” (page 6-12(E)).

Proceed as follows to use quick editing.



Quick edit procedure

- 1** Search the player and recorder tapes for the scenes where you want to set the IN points, then freeze the pictures there.
- 2** Press the PREVIEW button.
The still playback positions are set as the IN points for player and recorder, and a preview begins. However, if you have already set IN points, the existing IN points are not changed.
- 3** When you reach the scene where you want to set the OUT point, press the recorder OUT button while holding down the ENTRY button.
The recorder OUT point is set. About two seconds later, the player and the recorder stop (unless you are editing in assemble mode, in which case the recorder stops one second after the IN point).
- 4** Press the AUTO EDIT button.
An automatic edit begins.

If you want to skip the preview.

In step **2**, press the AUTO EDIT button instead of the PREVIEW button.
The edit begins immediately.

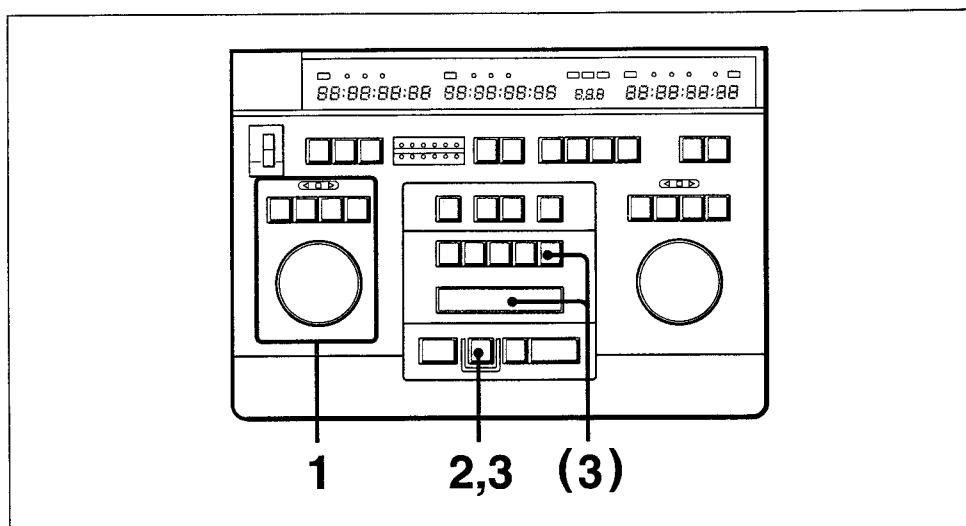
When you reach the scene where you want to stop, press the AUTO EDIT button again, or press the recorder OUT button while holding down the ENTRY button.

Resuming Edit After Setting Player IN Point — Butt Editing

After an automatic edit, the recorder returns to the OUT point and stops. Therefore, in cut or SYNC roll editing, you can begin the next edit immediately, as soon as you set the player's next IN point.

Proceed as follows to conduct a butt edit.

This procedure automatically sets the recorder OUT point. If you want to set the recorder IN point for the next edit at the same time, set setup menu item 05 (AUTO EDIT POINT ENTRY) to rEC. This is convenient because it means that you do not have to worry about moving the search dial after executing the current edit.



Butt edit procedure

- 1** After completing an edit, search the player tape for the scene where you wish to set the next IN point. Freeze the picture there.
- 2** Press the AUTO EDIT button.
An automatic edit begins.
- 3** When you reach the scene where you want to set the OUT point, press the AUTO EDIT button again, or press the recorder OUT button while holding down the ENTRY button.
The OUT point is set and the edit ends.

To continue with the next edit, return to step **1**.

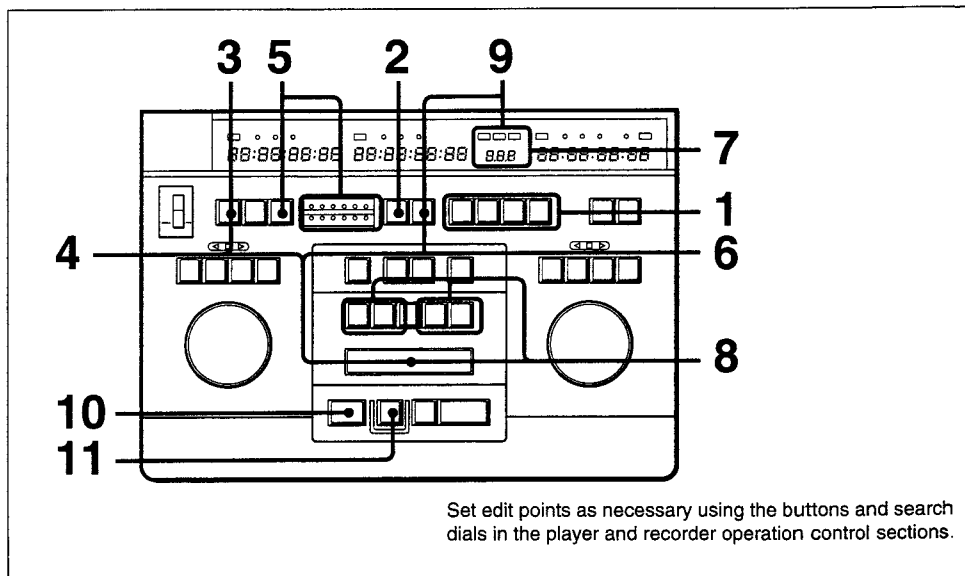
For more information about SYNC roll editing, see "Setting Transition Points During Preview or Edits — SYNC Roll Editing" (page 6-12(E)).

Using Auxiliary Sources

In addition to the VTRs corresponding to the P1 and P2 buttons in the source selection section, you can edit using sources such as video cameras and tape recorders connected to video switchers or audio mixers.

The following example shows how to perform an A/B roll edit, in order to switch from the picture of player 1 to the picture of a video camera connected to the VIDEO INPUT 3 connector of a DFS-500 DME switcher. The input from the DFS-500 corresponds to this unit's AUX 1 (ENTRY + P1) button.

For more information about correspondences between this unit's auxiliary input selection buttons and equipment connected to the SWITCHER and MIXER connectors, see page 3-6(E).



Editing procedure using an auxiliary source

- 1** Select the edit mode.
- 2** Press the A/B button.
The button lights.
- 3** Press the P1 button to select player 1 as the FROM source.
- 4** Press the AUX1(ENTRY + P1) button to select the video camera as the TO source.
- 5** Press the FROM TO button to set the camera's duration.
The green TO indicator lights.
- 6** Press the DUR(ENTRY + TRANS) button.
The button begins to flash.

(Continued)

Using Auxiliary Sources

- 7** Using the EDIT NO./TRANS/DUR buttons, set the camera duration (maximum 999 frames).
When using an auxiliary source as the TO source in open-end editing (without setting a recorder OUT point), set the TO source duration to 0. Set the source duration to 0 also in open-end cut editing.
- 8** Set three out of the four IN/OUT points for player and recorder.
- 9** Press the TRANS button, turning its indicator on, and set the transition time.
- 10** If necessary, conduct a preview,
- 11** Execute the edit.

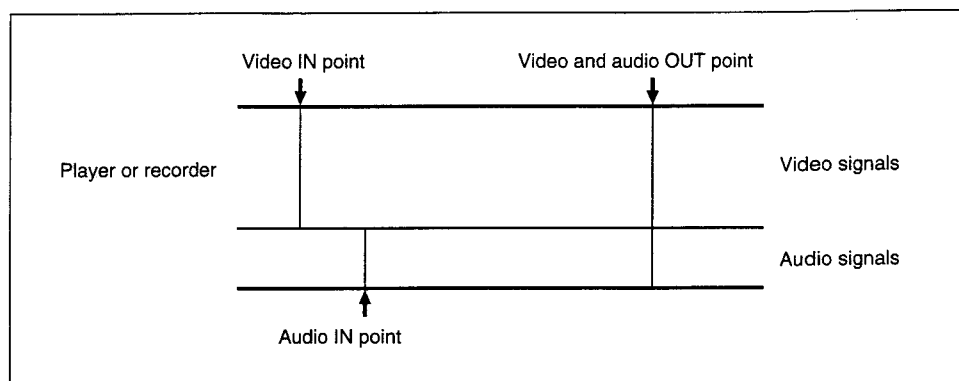
Note

You must set a duration when using an auxiliary source. If you are conducting an A/B roll edit, press the FROM TO button to light the red FROM TO indicator corresponding to the auxiliary source before setting the duration.

Setting Separate Audio and Video IN Points — Split Editing

Split editing

When editing in insert mode, you can advance or delay an audio IN point with respect to the video IN point.



Split editing

Split editing restrictions

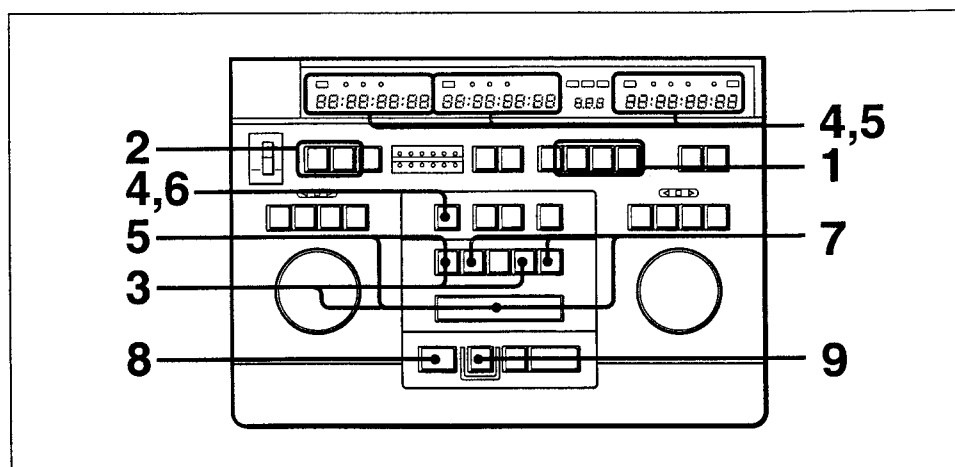
The following restriction apply during split editing:

- Split IN points cannot be set separately for audio channel 1 and audio channel 2.
- Split IN points can be set for the player audio or the recorder audio, but not for both. If you set split audio IN points for the player as well as for the recorder, the IN point set last is given priority.
- Split IN points cannot be used in DT editing. If you set an initial DT playback speed for a player, and then set an split audio IN point for that player, the split audio IN point is ignored at execution time.
- An split audio IN point cannot be set for the TO source in A/B roll editing. If set, it is ignored at execution time.

To execute a split edit

Proceed as follows.

Example: To set an split audio IN point for the player in cut editing



Split editing

Setting Separate Audio and Video IN Points — Split Editing

- 1** Select the channel for insert editing.
- 2** Select the player.
- 3** Set the IN points for both player and recorder.
These IN points become the video IN points.
- 4** Press the AUDIO SPLIT button.
The button lights. The IN indicators above the player and recorder time counters begin to flash.
- 5** Search for the scene where you wish to set the player's audio IN point. When you find it, press the player IN button together with the ENTRY button.
A split audio IN point is set for the player.
The player IN indicator stops flashing and lights. The recorder IN indicator goes out.
- 6** Press the AUDIO SPLIT button again.
The AUDIO SPLIT button starts flashing, to indicate that a split audio IN point has been set.
- 7** Set the player or recorder OUT point.
The OUT point can be set and confirmed regardless of the state of the AUDIO SPLIT button.
- 8** If necessary, conduct a preview.
- 9** Press the AUTO EDIT button to execute the edit.

To adjust a split audio IN point

Repeat steps **4** to **6**.

You cannot adjust a split audio IN point unless the AUDIO SPLIT button is lit.

To display the offset of a split audio IN point

Verify that AUDIO SPLIT button is lit, then press the IN button together with the OUT button.

The time counter of the VTR for which you set the split audio IN point displays the difference between the split audio IN point and the video IN point.

Note on trimming IN and OUT points while the AUDIO SPLIT button is lit

It is not possible to use the \boxplus / \boxminus trim buttons to adjust split audio IN and video OUT points simultaneously.

To use split IN points in A/B roll editing

Follow the procedure explained above, but be mindful of the following points.

- Source designations apply to both the FROM and TO sources.
- You can set split audio IN points for the FROM source or for the recorder, but not for both.
- You need to set a transition time for effects.

Editing Still and Variable-Speed Playback — DT Editing

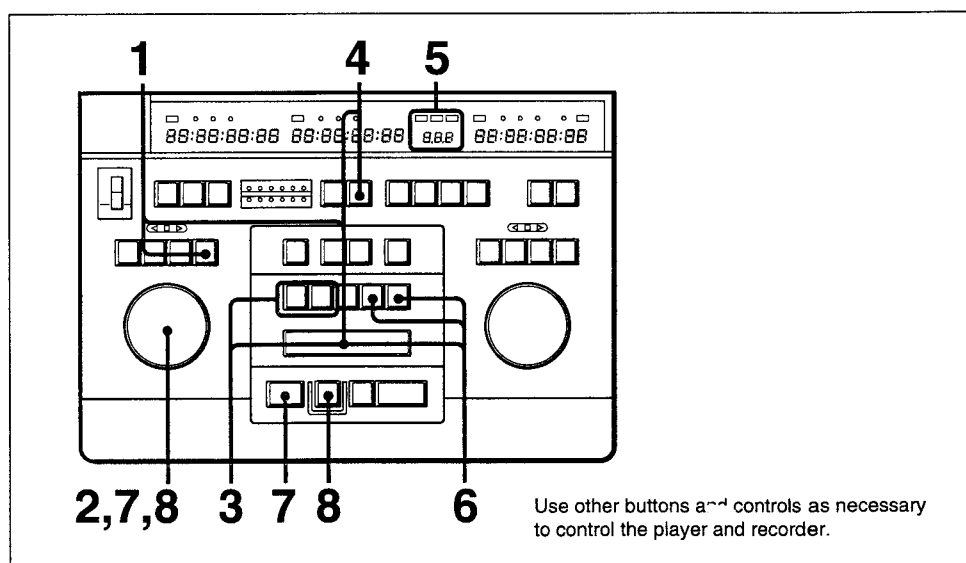
When using a player VTR that supports Dynamic Tracking (DT), you can begin editing at a specified initial speed, and then vary the speed during recording by rotating the search dial. The playback speeds which may be set are 0, $\pm 3/100$, $\pm 1/10$, $\pm 1/5$, $\pm 1/2$, ± 1 , ± 1.5 , ± 2 , and ± 3 times normal speed.

Note

In DT editing, the allowable playback range and actual playback speeds may vary for different players. Use the setup menu (SEtUP-18 and SEtUP-19) to set the maximum playback speed in the forward direction to ± 2 or ± 3 times normal speed, depending on the capabilities of your player.

To perform DT editing with one player

Proceed as follows.



To perform DT editing with one player

- 1** With the player search dial in the raised position, press the VAR(ENTRY + FF) button.
The player enters variable-speed playback mode. The player direction indicator (■) starts flashing.
- 2** Start playback with the player, and rotate the search dial to select the desired speed.
- 3** At the scene where you want to set the player IN point, press the ENTRY button while holding down the player IN and OUT buttons.
The current tape position is set as the IN point. The current tape speed is set as the initial DT playback speed, and the red FROM TO indicator corresponding to the DT player begins to flash.
- 4** Press the DUR(ENTRY + TRANS) button.
The button starts flashing.

(Continued)

- 5** Enter the duration using the EDIT NO./TRANS/DUR buttons (maximum 999 frames).
If you are conducting an open-end edit (without setting the recorder OUT point), set the duration to 0.
- 6** Set the recorder edit points.
- 7** If necessary, conduct a preview.
The player's speed at the IN point will be the DT initial speed. After passing the IN point, you can rotate the search dial to vary the speed.
- 8** Press the AUTO EDIT button to execute the edit.
To vary playback speed during an edit, rotate the search dial in the same way as you do during a preview.

If you want to change the playback speed during editing

Leave the search dial in the initial speed position, set in step **3**, until playback passes the IN point. If you rotate the search dial before beginning a preview or automatic edit, the playback may be subject to sudden variations in speed.

To set the player IN point precisely in DT editing

Replace steps **2** and **3** of the previous procedure with the following steps.

- 1** Rotate the search dial to view the playback. At the scene where you want to set the player IN point, move the search dial to the center position to stop the tape.
- 2** While pressing the player IN and OUT buttons, press the ENTRY button.
The initial playback speed is set to 0 times normal speed.
- 3** Rotate the search dial to select the desired speed.
- 4** While pressing the ENTRY button, press the AUDIO SPLIT button.
The initial playback speed is changed from 0 times normal speed to the current playback speed.

To carry out A/B roll DT editing

- 1** Select a player which supports DT playback as the FROM source or the TO source, then carry out steps **1** to **5** in the procedure "To perform DT editing with one player" on *page 6-9(E)*.
When editing the TO source in DT mode, set the duration to 0 if you are conducting an open-end edit (without setting the recorder OUT point).
- 2** Depending on whether or not you will carry out DT editing with the other player as well, proceed as follows.
 - If DT editing will not be used with the other player
Set the edit points for the other player.
 - If DT editing will be used with the other player
Carry out steps **1** to **5** in the procedure "To perform DT editing with one player."
- 3** Press the TRANS button, turning its indicator on, and set the transition time.

-
- 4** Carry out steps **6** to **8** in the procedure “To perform DT editing with one player.”

Currently selected player during DT editing with two DT players

During DT editing with two DT players, the search dial operates to change the speed of the currently selected player only. The currently selected player is the player corresponding to the lit source selection button, either P1 or P2.

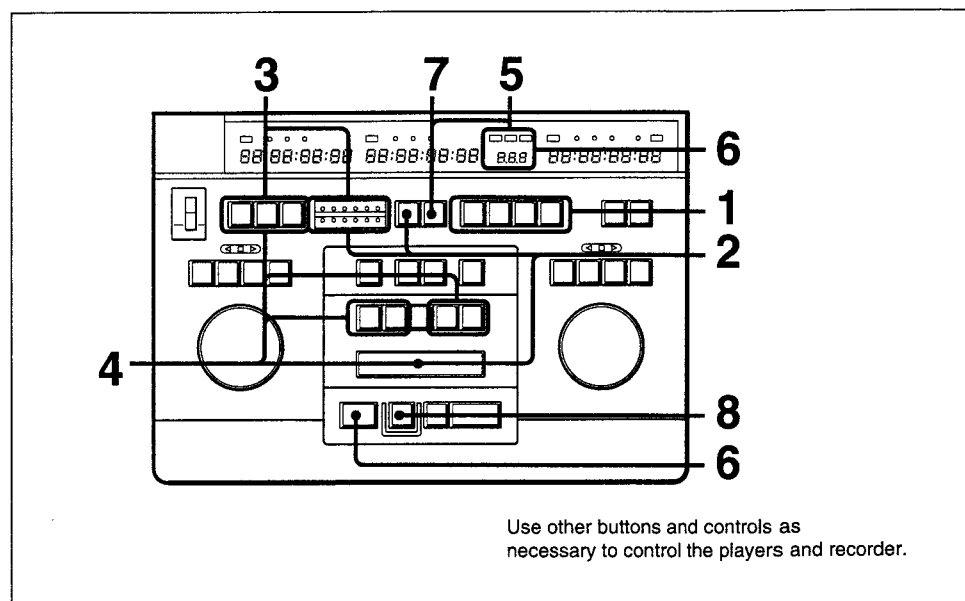
Note

You must set a duration for the player used in a DT edit. If you are conducting an A/B roll or sync roll edit, press the FROM TO button to light the red FROM TO indicator corresponding to the player before setting the duration.

Setting Transition Points During Preview or Edits — SYNC Roll Editing

Using two synchronized players, you can begin a special effect transition at any point in the edit.

To perform a SYNC roll edit, proceed as follows.



SYNC roll editing procedure

- 1** Select the edit mode.
- 2** Press the SYNC (ENTRY + A/B) button.
The button lights. The green FROM indicator in the source selection section lights.
- 3** Select the FROM and TO sources.
- 4** Set the edit points for the recorder and the FROM and TO sources.
 - If the FROM and TO sources are VTRs (corresponding to the P1 and P2 buttons), you do not need to set their OUT points. The OUT points will be calculated automatically at the time when you execute the edit or preview.
 - If the FROM or TO source is an auxiliary source, corresponding to the AUX1 (ENTRY + P1), AUX2 (ENTRY + P2) or AUX3 (ENTRY + FROM TO) button, or if the FROM or TO source is being used in DT editing, you do not need to set the duration.
- 5** Set the transition time.
If a preview is unnecessary, proceed to step **8**.
- 6** Execute a preview.
The FROM and TO sources begin to run simultaneously. When the recorder passes its IN point, the TRANS button begins to flash rapidly and the duration is shown in the EDIT NO./TRANS/DUR display.

-
- 7** Press the TRANS button at the desired scene.
The transition begins.

To change the transition IN point

Return to step **6** and repeat.

- 8** Execute the edit.
However, if you have skipped the preview, press the TRANS button at the desired scene, as was done in step **7**.

If you previewed the edit

The transition is executed at the same point as during the preview.

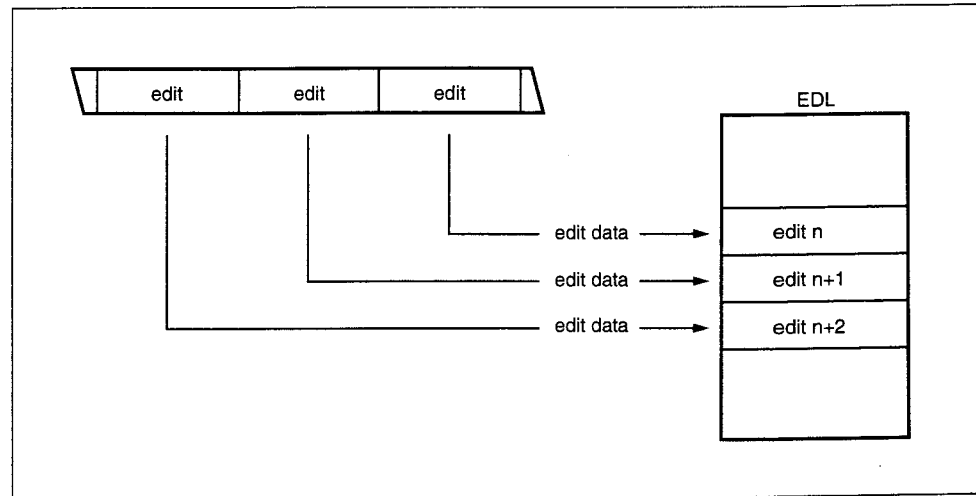
Controlling External Equipment via the GPI Interface

This unit features a GPI interface for controlling external equipment such as still picture devices, character generators, and superimposers. The timing and pulse width of signals output from the GPI OUT connector can be specified using setup menu items 06, 07 and 08 of the setup menu. These signals are output when you conduct a preview or edit.

Please consult the manuals of the connected equipment for more information about the type of signals which are required.

Outline

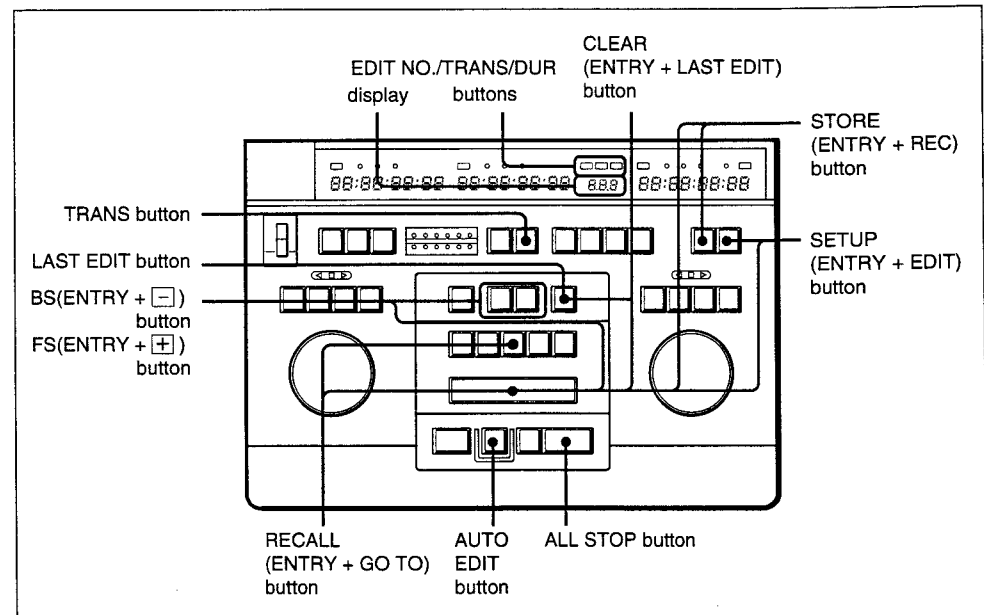
The unit manages edit data by means of a revisable edit decision list (EDL). The set of all data registered for one edit is called simply an edit. Each edit is assigned a number when it is registered in the EDL. You can use this number to recall the edit whenever you need it again.



Edit decision list

Buttons used to manage the EDL

The following buttons are used in the EDL management procedures explained in this chapter.



Buttons used to manage the EDL

Internal EDL mode and external EDL mode

You can select internal or external EDL mode with setup menu item 25 (EDL MODE).

For more information about the setup menu, see "PVE-500 Setup" (page 3-8(E)).

Internal EDL mode

The unit's internal EDL contains up to 100 edits, numbered 01-99,00. You can add edits to the EDL, delete them, or recall and execute them at any time. You can also download and upload data from the internal EDL to and from a personal computer or other external device.

The EDL remains in the unit's memory for at least 100 hours after the unit is turned off (provided that the unit has been powered on for at least two hours continuously).

External EDL mode

Each time you press the AUTO EDIT button to execute an automatic edit, the edit is output to the external device. Up to 999 edits can be output, numbered 001 to 999. External EDL mode is a convenient way to review edit data, for example by outputting the data to a printer.

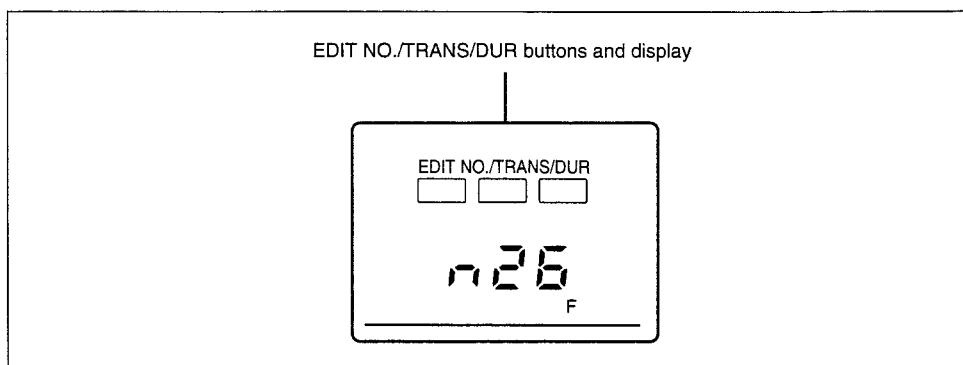
Edit number display

Whenever the TRANS button is not lit, the number of the current edit is displayed in the EDIT NO./TRANS/DUR display.

Edit number display in internal EDL mode

In internal EDL mode, the current edit number is displayed as a two-digit number. Depending on the status of the edit, the number may be preceded in the display by 'd' or 'n'. The meaning of these letters is as follows.

- n: New edit, not yet registered in the EDL.
- d: Deleted from the EDL.



Display of edit number "n26" in internal EDL mode

Edit number display in external EDL mode

A three-digit edit number is displayed.

Each time you press the AUTO EDIT button, the edit is output to the connected equipment, and the edit number is updated.

Recalling the previous previews — the last edit buffer

The two most recent edits for the current edit number are saved automatically. This is convenient when you want to compare two previews.

To use this function, press the LAST EDIT button.

Each time you press the button, the most recent preview data is replaced by the previous preview data, or vice versa.

When only one preview has been executed with the current edit number

When you press the LAST EDIT button, the preview data is recalled.

When no preview has been executed with the current edit number

This function is not available.

Registering an Edit (Internal EDL Mode Only)

Edits are registered under numbers from 01 to 99, 00. There are two ways to register an edit: automatically, whenever you execute an edit, or manually, without executing an edit.

To register an edit automatically

Press the AUTO EDIT button. The edit is registered in the EDL.

To register an edit without executing it

Press the STORE(ENTRY + REC) button.

When you register a new edit (preceded by 'n' in the edit number display)

The display changes to the next edit number.

When you save an edit after recalling and modifying it

The displayed number does not change.

When you recall an edit from the EDL and execute it without changing it

The displayed number does not change.

When you register edit number 00 (the 100th edit)

The edit number may or may not be updated, depending upon the setting of setup menu item 26 (AUTO EDL CLEAR).

- SEtUP-26 is OFF (overwrite disabled)

The edit number cannot be updated because the EDL is full. The edit number display changes to "FUL", and returns to the current edit number "00" when you press a key.

- SEtUP-26 is On (overwrite enabled)

The edit number changes to "n01". The edit previously registered under number 01 is lost.

If you continue to register edits in this state, the unit continues to overwrite old edits in the order n02, n03, ...

Recalling an Edit (Internal EDL Mode Only)

Proceed as follows to recall and execute an edit registered in the EDL.

To recall an edit using the edit number

Proceed as follows.

- 1** Verify that the TRANS button is not lit.
If the button is lit, press it once. If it is flashing, press it twice.
- 2** Enter the number of the edit which you want to recall, using the rightmost two buttons of the three EDIT NO./TRANS/DUR buttons.
The edit number flashes.
- 3** Press the RECALL(ENTRY + GO TO) button.
The edit specified in step **2** is recalled. If you specified an edit number which does not exist in the EDL, an 'n' appears in front of the displayed edit number.

To recall an edit earlier than the current one

Press the BS(ENTRY + \square) button.

The edit immediately before the currently displayed edit is recalled.

Keep pressing the button until the display shows the edit number you want. Each time you press the button, the previous edit is recalled, up to edit 01.

If setup menu item SETUP-26 (AUTO EDL CLEAR) has been set to On, and if an edit has actually been overwritten beyond edit 00, then edit 00 can be recalled by pressing the BS (ENTRY + \square) button after recalling edit 01. As shown below, this makes it possible to recall edits up to the one with a number one larger than the new edit (the edit preceded by 'n').

xx+1 ← ... ← 99 ← 00 ← 01 ← ... ← nxx

To recall an edit later than the current one

Press the FS(ENTRY + \oplus) button.

The edit immediately after the currently displayed edit is recalled.

Keep pressing the button until the display shows the edit number you want. Each time you press the button, the next edit is recalled, up to the new edit (the edit preceded by 'n').

If setup menu item SETUP-26 (AUTO EDL CLEAR) has been set to On, and if an edit has actually been overwritten beyond edit 00, then edit 01 can be recalled by pressing the FS (ENTRY + \oplus) button after recalling edit 00. As shown below, this makes it possible to recall edits up to the new edit (the edit preceded by 'n').

xx+1 → ... → 99 → 00 → 01 → ... → nxx

To execute a recalled edit

Press the AUTO EDIT button.

To execute all edits from a recalled edit to the end of the EDL

Press the MULTI(ENTRY + AUTO EDIT) button.

The unit automatically executes all subsequent edits, beginning with the current edit and continuing in edit number order to the last edit registered in the EDL.

Adjusting and Deleting Edits

You can adjust edits after recalling them from the EDL. You can also delete edits from the EDL, and restore deleted edits by undoing the deletion.

To save an edit which has been recalled and adjusted (internal EDL mode only)

Follow the normal procedures to recall the edit, change it, and register it in the EDL.

For more information, see "Recalling an Edit" (page 7-6(E)) and "Registering an Edit" (page 7-5(E)).

To delete an edit from the EDL (internal EDL mode only)

Recall the edit which you want to delete, then press the CLEAR(ENTRY + LAST EDIT) button.

A 'd' appears in front of the displayed edit number.

If an edit is preceded by 'd', you can follow the normal procedures to recall and preview the edit. However, it cannot be executed and stored in the EDL again, and it cannot be downloaded.

To restore a deleted edit

Recall the edit, then press the LAST EDIT button.

The 'd' displayed in front of the edit number disappears.

To clear the EDL

Press the CLEAR(ENTRY + LAST EDIT) button together with the ALL STOP button.

The EDL is initialized and all edits are erased.

Note

When the EDL is initialized, all of the edits which it contains are lost permanently. They cannot be restored.

When you initialize the EDL

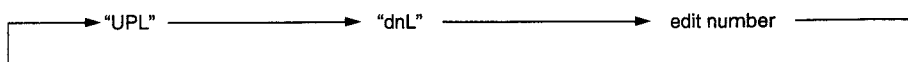
- In internal EDL mode, all edits in the EDL are erased and the edit number display changes to "n01".
- In external EDL mode, the edit number display changes to "001".

Uploading/Downloading the EDL (Internal EDL Mode Only)

You can connect a personal computer or other external equipment to the EDL IN/OUT connector in order to download data from the EDL to the external device. You can also upload previously downloaded data from the external device into the EDL.

Proceed as follows to upload or download EDL data.

- 1 Prepare the external equipment for uploading or downloading.
- 2 Display the current edit number in the EDIT NO./TRANS/DUR display.
- 3 Press the leftmost of the three EDIT NO./TRANS/DUR buttons to display “dnL” (download) or “UPL” (upload).
Each time you press the button, the display changes in the following order.



- 4 Press the RECALL(ENTRY + GO TO) button.

When downloading

The data is output immediately to the external device.

During the transmission, the “dnL” display changes to a flashing number “dXX”, where XX represents the number of the edit being transferred. When the download is completed, a warning sound is heard and the display returns to “dnL”.

To stop the transmission, press the ALL STOP button.

Registered edits are downloaded. If setup menu item SEtUP-26 (AUTO EDL CLEAR) has been set to On, and if an edit has actually been overwritten beyond edit 00, then edits are downloaded beginning with the edit immediately after the new edit (the edit preceded by ‘n’), and continuing until the edit immediately before the new edit.

When uploading

The data is imported into the EDL as soon as you execute the upload from the external equipment.

During the transmission, the “UPL” display changes to a flashing number “UXX”, where XX represents the number of the edit being transferred. When the upload is completed, a warning sound is heard and the display returns to “UPL”.

To stop the transmission, press the ALL STOP button.

If setup menu item SEtUP-26 (AUTO EDL CLEAR) has been set to OFF, the first 100 edits received in the transmission are registered in the order 01 to 99, 00. The 101st and following edits are ignored.

If setup menu item SEtUP-26 (AUTO EDL CLEAR) has been set to On, the first 99 edits received in the transmission are registered in the order 01 to 99. The 100th and following edits are ignored.

Note

When an EDL containing deleted or overwritten edits is downloaded and then uploaded, the edit numbers of the edits in the list are changed. For this reason, it is no longer possible to reproduce DFS-500 snapshots.

For more information about uploading and downloading EDL data, contact a Sony service representative.

Appendix

Error Messages	A-2 (E)
In Case of Trouble	A-3 (E)
Specifications	A-4 (E)
Optional Accessories	A-5 (E)
Recommended Equipment	A-5 (E)
Glossary	A-6 (E)

Error Messages

If the unit is not able to operate normally, for example after an invalid key operation, it issues a warning sound or displays an error message.

Error messages

Error Message	Location	Problem	Countermeasure
IN and OUT indicators flash alternately	Time counter of relevant VTR	Invalid relation between IN and OUT points at time of preview, automatic edit, or edit registration.	Reset the IN and OUT points correctly.
Edit SEt	Recorder time counter	At time of preview, automatic edit, or edit registration: • edit mode has not been set. • assemble mode was selected for split edit.	Select the correct edit mode.
rEC Inhi	Recorder time counter	At time of preview or automatic edit, the recorder or cassette is record inhibited.	Enable recording for the recorder or cassette.
Srch Err	Time counter of relevant VTR	When seeking to a tape position with the GO TO button, or at time of preview or automatic edit: • Beginning or end of tape, or discontinuous time codes detected. • VTR cannot seek to point because it was operated manually.	<ul style="list-style-type: none"> • Check to be sure that the specified tape position was correct. • Check to be sure that time codes are recorded continuously. • Repeat the seek command without running tape manually.
S-LO Err (not displayed when SETUP-09 is set to OFF)	Time counter of relevant VTR	VTR does not servo lock at IN point for preview or automatic edit.	Execute again. In some cases, you can set SETUP-09 to OFF.
Sync Err (not displayed when SETUP-10 is set to OFF)	Time counter of relevant VTR	VTR does not synchronize during preview or automatic edit.	Execute again. In some cases, you can set SETUP-10 to OFF.
Ctrl Err	Time counter of relevant VTR	VTR cannot be controlled during a preview or automatic edit.	<ul style="list-style-type: none"> • Check to be sure that the VTR is not in LOCAL mode. • Check to be sure that the VTR's AUTO OFF indicator is not lit, and that the VTR is not displaying an error code.
FUL (not displayed when SETUP-26 is set to On)	EDIT NO./TRANS/DUR display	EDL buffer is full.	<ul style="list-style-type: none"> • Clear the EDL. (All edits lost) • Set SETUP-26 to On. (Edits overwritten, beginning with 01)
Warning sound (no display)		Edit point not set at time of preview, automatic edit or registration.	Set edit points and execute again.
		Connection to VTR lost.	<ul style="list-style-type: none"> • Check for loose connections. • Check to be sure that VTR power is on.

In Case of Trouble

Problem	Checkpoint
Nothing is displayed in the time counter.	<ul style="list-style-type: none"> • Are there any loose connections? (Check to be sure that all connectors are firmly seated.) • Is the VTR power turned on?
The time counter display is flashing.	If VTR LOCAL/REMOTE switch is set to LOCAL, set to REMOTE.
The time counter display doesn't change.	Are the necessary CTL signals recorded on the tape?
Preview or auto edit not executed when the PREVIEW or AUTO EDIT button is pressed.	<ul style="list-style-type: none"> • Is the cassette record inhibited? • Are there any loose connections? (Check to be sure that all connectors are firmly seated.) • Has the tape run to the end? If so, rewind it. • Are the VTR's INPUT SELECT switches set properly? • Are this unit's edit mode selection buttons set correctly? • In insert mode, are CTL signals recorded on the entire tape? (<i>See page 3-15(E).</i>) • In assemble mode, are CTL signals recorded around the IN point? (<i>See page 3-15(E).</i>) • Are the IN and OUT indicators flashing alternately? (If an IN point was set after an OUT point. Reset the edit points correctly.) • The VTR's AUTO OFF indicator should not be lit? (<i>See your VTR manual for details.</i>)
Preview and automatic edit can be executed, but edit points are at different positions.	<ul style="list-style-type: none"> • You may have reset the time counter since setting the edit points. • With some VTRs, the actual edit points may be slightly different from those which you entered. Correct with the $\boxed{+}$ / $\boxed{-}$ trim buttons.
There is picture breakup between edits.	<ul style="list-style-type: none"> • Are CTL signals continuous across the edit transition? • There is picture breakup between edits when the REC button is used. Use the AUTO EDIT or EDIT button instead.
There are horizontal stripes on the screen.	Guard band noise appears on the screen at playback speeds other than normal speed. This is not a malfunction.
Playback is unstable.	<ul style="list-style-type: none"> • Is there noise in the VTR input signals? (Check by changing the INPUT SELECT switch.) • In insert editing, the picture may be unstable if CTL signals are irregular or noisy. • The recorder picture may break up when you search with the player. (Stop the player, or return it to normal playback.)
The picture drifts during searches.	Try adjusting the horizontal and vertical sync knobs on the monitor.
A video switcher or audio mixer does not respond.	<ul style="list-style-type: none"> • Are there any loose connections? (Check to be sure that connectors are firmly seated.) • Is the switcher or mixer power on? • Is the video switcher set to Editor Enable? • Is the mixer control mode set correctly? • Are the necessary reference video signals being supplied to this unit?

Specifications

General

Power	AC 120V (for U.S. and Canada)/220 to 240V (for Europe) $\pm 10\%$, 47.5 to 63Hz
Power consumption	Maximum 10W (for U.S. and Canada)/11 W (for Europe)
Operating Temperature	5°C to 40°C (41°F to +104°F)
Storage Temperature	-20°C to +60°C (-4°F to +140°F)
Mass	3.2 kg (7 lb)
Dimensions	390 × 94 × 265 mm (w/h/d) (15 ³ / ₈ × 3 ³ / ₄ × 10 ¹ / ₂ inches)

Editing Precision

Time code (normal) synchronization: ± 0 frames
CTL (normal) synchronization: ± 1 frames (may vary depending on connected VTR)

Input and Output Connectors

AC IN (3-pin male)
PLAYER 1 (D-SUB, 9-pin female)
RS-422A
PLAYER 2 (D-SUB, 9-pin female)
RS-422A
RECORDER (D-SUB, 9-pin female)
RS-422A
SWITCHER (D-sub, 9-pin female)
RS-422A
MIXER (D-SUB, 9-pin female)
SERIAL/PARALLEL switch
SERIAL: RS-422A
PARALLEL: Sony parallel mixer interface
EDL IN/OUT (D-SUB, 9-pin male)
RS-232C
Start bit: 1
Data bits: 7
Parity bit: even
Stop bits: 2
Speed: 9600 baud
Handshake: XON/OFF (no handshake by signal wire)

Connector pin-out

Pin	Name	Signal
2	RXD	Receive Data
3	TXD	Transmit Data
5	GND	Signal GND
1, 4, 6 to 9		Reserved

GPI OUT (BNC type)

Active low

Low level: 0 to 0.5V, 24mA or less

High level: 3.5 to 5V

REF. VIDEO IN (BNC type)

0.5 to 2Vp-p, 75-ohm, unbalanced

(High definition TV synchronization signals not supported)

Supplied Accessories

Power cord (1)

Operation and maintenance manual (1)

Design and specifications subject to change without notice.

Optional Accessories

RMM-500 control panel mount adaptor

RCC-5AA mixer control cable (5m) (about 16 feet)

RCC-5G/10G/30G 9-pin remote cables (5m/10m/30m)
(about 16 feet/33 feet/98 feet)

Recommended Equipment

VTRs: VTRs having 9-pin remote connector

BVH, DVR, DVW, BVW, PVW, UVW, BVU, VO, EVO, SVO/SVP, PCM and
LVR/LVA series

Video switchers:

DFS-500, BVS-3000, DVS-8000, DVS-6000, DVS-2000 series

BVS-V1201, BVS-A1201

BVS-1100, GVG model 100

Audio mixers:

- 15-pin parallel interface

MXP-29, MXP-290/290R, MXP-P390/P390R, VSP-A600/A600R

- 9-pin serial interface

MXP-S390/S390R, VSP-8000, DMX-E3000, DMX-E2000

Glossary

A/B roll editing

An edit in which two or more players are used to create special effects such as dissolve and wipe, and one recorder is used to record the results of the edit.

Black burst

A video signal which has no luminance or chrominance components, but contains all other elements (sync and color burst) of a video signal. Black burst is a common reference signal used for synchronizing video equipment.

Color bar signals

Test signals displayed on the screen as vertical stripes of different colors. Used for adjustment of hue, saturation of a video camera and video monitor.

Color framing

To adjust the player IN points relative to the recorder IN points to maintain the color subcarrier phase, one cycle of which consists of two (NTSC)/four (PAL/SECAM) frames. However, this unit does not modify the player IN point data. Instead it uses the color framing servo functions of the connected VTRs to achieve the same effect.

CTL (Control Signal)

Abbreviation of control signal. In VTRs, regular pulses recorded in a longitudinal tape track. By counting this signal, it is possible to determine the number of frames, and hence the tape's running time. Used mainly to adjust the tracking position of video heads, and to achieve time code continuity in continuous recording.

Dissolve

An effect in A/B roll editing, in which the old video (FROM source) is faded out while the new video (TO source) is faded in.

Drop-frame mode

A mode of time code running in which the time difference between a time code and NTSC video run is adjusted (the time code runs at 30 frames/sec while the video runs at 29.97 frames/sec). The time code and video are synchronized by dropping the first two frames of the time code every minute, except at the ten-minute marks. See also Non-drop-frame mode.

E-E mode (Electric-to-Electric mode)

The input signals are passed through the recorder's electronics, but not through magnetic conversion circuits such as heads and tapes, and supplied to the output connectors. This mode is useful for confirming the input signals.

Edit

To process original audio and video signals by adding and replacing other signals over a specified segment on a videotape.

In this manual, an edit also refers to the data used to edit such a specified segment on a video tape.

GPI (General Purpose Interface)

An interface that allows this unit to control devices such as still picture devices, character generators and superimposers which are not equipped with a defined interface.

Non-drop-frame mode

A mode of time code running in which the number of frames of the time code and video run is not adjusted.

See also Drop-frame mode.

NTSC (National Television System Committee) system

A color television system developed by NTSC and adopted as the standard television system in the United States and Japan.

PAL (Phase Alternation by Line) system

A color television system developed in Germany and adopted as the standard television system in European countries.

Postroll

To run a videotape beyond an edit-end point to check the picture that follows.

Preroll

To run a videotape to a point prior to an edit-start point to enable the tape to reach a steady speed and to synchronize.

Reference video signal

A video signal which contains a sync signal and color burst signals, used as a reference for synchronization of video equipment.

SECAM (Sequential-and-memory) system

A color television system used in France, former Soviet Union, and Eastern Europe.

Servolock

To lock the phase and speed of a VTR's head drum rotation and tape transport to a reference signal during recording and playback.

Source

A video or audio signal source.

Standby mode

One of two conditions in a VTR's stop mode. The head drum is rotating and the tape is wrapped around the drum. The VTR is ready for recording or playback. The other condition of the VTR's stop mode is called standby off mode. In standby off mode, the head drum does not rotate and tape is slackened. There is no damage to the video heads and the tape, but the VTR is not ready for immediate recording or playback.

Synchronization

To adjust the running speed and phase of playback and recording tapes while the tapes run from a preroll point to an edit-start point, to enable accurate editing.

Time code

A digitally encoded signal that is recorded on videotape in units of hours, minutes, seconds, and frames, to label each frame of video. SMPTE time code is used for the NTSC system, and EBU time code is used for the PAL/SECAM system. There are two kinds of recorded signal: longitudinal time code (LTC) and vertical interval time code (VITC).

Tracking

An electronic adjustment of the video heads in the playback phase so that they match the recording phase of the tape.

Wipe

An effect in A/B roll editing, in which the old video (FROM source) is wiped off the screen by the new video (TO source).



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